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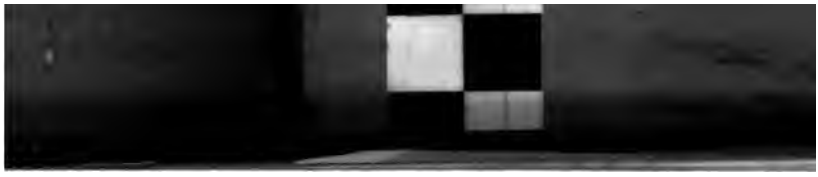

(1). Regulations for the great manœuvres of the Prussian army. translated by Major Gen. Sir C. Stanley K.C.B.

(2). A précis of a Retrospect on the Tactics Retrospect. by Col. von Schellendorf - tra by Col. Onmey C.B.

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(4). On the Prussian Infantry 1869. tra by Col. Onmey C.B.

(5). Military maxims suggested or exem by the last autumnal manœuvres of C tinental armies. by Col. C.C. Shute C

(6). Extracts from the Prussian orders f conducting large manœuvres. trans by Capt. Culligan 39th. Regiment

(7). A Military Memorial by Prince Fre Charles of Prussia. Edited from the German.

[*Authorised Translation.*]

REGULATIONS

FOR THE

GREAT MANŒUVRES

OF THE

PRUSSIAN ARMY,

29TH JUNE, 1861.

Translated from the German

BY

MAJOR-GEN. SIR CHARLES STAVELEY, K.C.B.

SECOND EDITION.

LONDON:
W. MITCHELL & CO., 39, CHARING CROSS.

1871.

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Gift
Prof. L. C. Karpinski
1-10-52

PREFACE.

AT a time when all armies feel the necessity for a change, consequent on the adoption of a new arm, it may be interesting to British Officers to have a translation of the "Instructions for the Manœuvres of the Prussian Army." They will be found to contain much useful matter in a very small compass.—*(Translator.)*

ROYAL COMMAND.

BABELSBERG CASTLE.

Dated 29th June, 1861.

THE following Regulations comprise the various orders, instructions, and traditions which have been the rule until now for the exercise of troops in large bodies. They are to be an authority in this important matter, and being in a condensed form will be the more accessible; they contain new matter insomuch only as the introduction of rifled arms has rendered it necessary to point out their influence on tactics.

They maintain the principles laid down in the order of 12th July, 1840.

I.—That the brigade is the largest tactical unit with which exercises that are mere drill and contained in the Regulations are to be executed.

II.—The manœuvres being always executed by the co-operation of the different arms of the Service, their common action must be so combined that the movements of the troops are in accordance with the nature of the ground.

I desire you to publish these orders, and to see that all commanding officers in my army are made thoroughly acquainted with their purport and contents.

(Signed) WILLIAM.

To the Minister of War and Marine.

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REGULATIONS

FOR THE

GREAT MANŒUVRES

OF THE

PRUSSIAN ARMY,

29TH JUNE, 1861.

PART I.—DIRECTION.

I.—*General considerations on the object, dispositions, and direction of the manœuvres.*

The object of all manœuvres is—to qualify the leaders of all ranks and those under them in a campaign to carry out the duties required of them; to teach the men to handle their weapons skilfully, and to execute the necessary movements with rapidity and order; and, finally, to ascertain the degree of efficiency attained by each corps.

There are two kinds of exercises:—

(1.) Those whose object is simple tactics, designed to teach troops the use of their weapons and to accustom them to go through field movements (drill) with rapidity and regularity.

(2.) Those in which the features of the ground are considered, and which are conducted in accordance with a preconceived idea (manœuvres).

There are two ways of conducting them :—

(*a.*) Against a skeleton enemy led by an officer appointed for the purpose, the troops (division or *corps d'armée*) being in one undivided command under a single chief.

(*b.*) Two divisions, one against the other, each under a separate commander, to whom a general idea is given (field manœuvre).

The exercises alluded to under head 1 are laid down in the instructions for the different arms. It is most essential that these regulations be followed, and that whoever commands should know how to select and apply the movements executed—but, above all, that he have confidence in himself.

It follows, from the nature of these exercises that the brigade is the largest tactical unit with which the object proposed can be carried out.

In order that the manœuvres may be useful and that the different arms of the Service may co-operate towards a common end, they should be executed on ground adapted to the movements of the troops, and where there are obstacles to be overcome.

The main object of the exercises under head 2 is to put the ability of officers and soldiers to the proof, to train them to take every advantage of the ground, and to decide with quickness and intelligence on the nature of their position.

It is desirable when pre-supposing the relative position of troops (general idea), to give the officer in chief command and the several leaders of the force an oppor-

tunity of showing and of improving their military *coup d'œil*, of giving proof of quickness of decision and knowledge of handling troops according to the features of the ground and the circumstances that may arise.

It will be perceived by those who understand the purport of these exercises that no movement is dictated, no time fixed; all must be left to the discretion of the commander. Beyond the general idea, he has received no instructions defining the issue of the affair; in fact, the situation at the end of the manœuvre should be the *bonâ fide* result of his own dispositions.

Nothing would be more opposed to the intention of these exercises than to prepare for them by rehearsals beforehand.

All manœuvres will be therefore useful and instructive which place troops under circumstances in which they would find themselves in war, and where they will be accustomed to overcome the difficulties they encounter. It may happen in the field that a division or corps while on the march is ignorant as to whether or not it will fall in with the enemy, and if it does, in what position it will find him.

The unexpected news of his presence or his appearance will oblige the corps to deploy rapidly to take up a tactical formation. The corps may have marched in several separate columns, it will then have more difficulty in making the dispositions which the sudden appearance of the enemy necessitates. It is important that the troops should be exercised in these movements and that the commander should occasionally on the march announce suddenly the presence of the enemy, or cause the troops which are intended to represent him to appear. They will then be required to deploy from column of route, overcoming all the difficulties of the ground.

In order that these exercises may be profitable the commander should rectify the faults that may have been committed, on the spot, and impart the necessary instruction; all the movements ought therefore to be executed with the greatest steadiness and without precipitation. Order should be maintained in every manœuvre. If the erect carriage and steadiness required on parade cannot always be maintained, order should at any rate invariably prevail; it would otherwise be impossible to make a proper use of the troops. The "Appel"* must be kept up, for it is thus only that any one part of the force, a section for instance, can, in a moment, be disposed of, *i.e.*, by a simple order. The exercises under head 2 (*b*), are manœuvres of two *corps d'armée* (manœuvres in the field). They are placed in opposition to one another, in imaginary positions as if in war (general idea). The commanders having formed their opinions as to their respective situations, proceed according to their own judgment.

Another great object of these manœuvres is to test the aptitude of commanders, and give them experience in comprehending at a glance such incidents as may arise in war, to estimate them, and to act to the best advantage.

The general idea should always define the situation of the two parties, clearly and exactly, and in no way dictate what must be entirely left to the free judgment of the two commanders. Any interference or restriction as to the disposition of the troops would be quite opposed to the object of these exercises. The general idea may determine the strategical position of the two parties for the space of

* The "Appel" answers to our roll-call parade. The men fall in on the companies' private parades without arms and in fatigue dress and forage caps. The roll is then called, the orders are given out, and if it is pay day the men receive their pay.—(*Translator.*)

several days; the nature of the ground and other considerations, however, may render it advisable to substitute another idea for the exercises that follow. The general idea communicated to the two commanders should only inform them as regards the situation of their corps, and give them such instructions as they might themselves procure with the means at their disposal in actual war. It may also be supposed that the sudden news of other events has changed the state of affairs, and made it necessary to form fresh and suitable dispositions. The respective commanders notify in a general way the position and movements of the troops, but only make known the object to be attained and means at their disposal, in so far as is necessary for a full understanding of the orders. These orders should be as short and concise as possible, and as is customary on actual service, those which can be conveyed verbally should not be the subject of a written communication. Each leader of a fraction of the whole performs the part assigned to him in the dispositions, according to his knowledge of the locality and of the movements of the enemy; in short, to the best of his understanding of the circumstances that may be favourable or otherwise to the fulfilment of his task. These exercises will have effected the object in view, if they give the leaders on both sides opportunities of proving their judgment, and capacity to turn to account the situations and incidents that occur in war.

Much would be left to be desired if, at times and within certain limits, the leaders of brigades, battalions, squadrons and batteries, had not opportunities of acting on their own judgment in the general plan of operations, but were condemned to work always mechanically. The general idea would not coincide with the object of the

exercise if the plan of manœuvre did not excite a spirit of co-operation in the lower ranks. When the task assigned to each side is carried out in accordance with the object of the manœuvre, the dispositions made will exert the ability and intelligence of the leaders of all grades. The necessary division of a force going into action into advance guard, main body and reserve, enables several commanders to exercise their own judgment and act to a certain degree independently.

This opportunity occurs more frequently and under varied circumstances when detachments become necessary to carry out the general plan. If the movements on both sides only begin when each is fully aware of the position of the other and when further results can only be attained by an engagement, an important means of making these exercises instructive will have been neglected. The exercise of an engagement itself, mere tactics, is here only a secondary object. To take advantage of ground and apply the rules of tactics is also secondary. The main object lies in the proper use of the available forces to effect a given purpose. It consists, therefore, of marches and movements made out of sight of the enemy; in short, of all the preliminary measures the value of which must, in the end, be determined by the relative position of the two forces at the moment of action (which can only occur in actual war). The general idea should leave the widest scope for this essential part of the manœuvres. It should determine, in a manner that ought to correspond with the end in view, the position of each corps when the exercise begins and the point from which each shall commence its operations.

Each side must be under the necessity of procuring the required information regarding the position of its

adversary (of which it should have been in ignorance) by the employment of the same means as would be available on actual service. The distance between the opposing forces must be great enough to allow room for the movement of those detachments whose business it is on service to reconnoitre the force, position, &c., of the enemy. The exercise will be the more interesting and instructive if the ground to be reconnoitred is of a varied nature and suitable for all arms. The duties of outposts, sentries, supports, &c., demand in this latter case not only greater attention, but also a closer examination of the locality, and will then be the more instructive. The general idea may oblige one of the two sides to await in a defensive position the movements or even the attack of the enemy, to force the latter to sacrifice part of his troops in overcoming the difficulties of ground, and, thus weakened, to engage the reserve of his adversary.

In such a case, it is most essential to make a proper choice of position and to take skilful advantage of the locality generally, especially in placing the reserve. The offensive force is here obliged to attack, and its task is to discover the weak point of the enemy's position, to dispose of its troops according to their number and description, and to form and place the reserve advantageously. This last should never be wanting.

The general idea may induce both sides to fight; in this case they will meet with the mutual intention of attacking one another. The proper proceeding will here be to take a rapid glance at the situation, including all that the circumstances of ground, strength, and position of the enemy, &c., demand. The manœuvring forces approach each other according to the dispositions ordered. All that now takes place will be the more useful and

instructive according as it gives a more or less faithful representation of what happens in actual war. It is above all things necessary to appreciate thoroughly the various features of ground, to bear in mind their influence in the course of an action between troops of equal courage, and to make an appropriate use of them. If the exercises are to prove instructive, no means should be employed in the attainment of any desired object which it would be impossible or disadvantageous to make use of in a like case in war. A column of attack in a manœuvre must not, for instance, insist on what could only be brought about by a superiority of fire. In order that the leaders of the several fractions and different arms of the service may have an opportunity of manifesting their *coup d'œil* decision and the degree of proficiency they have attained, the whole of the movement must be executed leisurely, and with pauses, so that each leader may have time to look about him, consider the situation and form his own opinion on it. Neglect in observing the dispositions of the enemy occasionally gives rise to undue haste and precipitation. This is not only irregular, but entirely opposed to the object of these exercises, inasmuch as these dispositions would in war delay or even prevent an advance. In war moral effect is not unfrequently taken into account, which in mere exercises in time of peace can in no way be considered. The frequent practice of flank-turning movements in such exercises tends to unsteadiness and disorder in a greater degree than it would in war. A turning movement, viz., a threat on the flank or line of retreat of the enemy, cannot be considered in itself an absolute advantage to the side executing it or a disadvantage to the other side, all depends upon the manner in which the two parties meet at the end of the movement. The commander whose

flank is turned may have his forces well together, or his reserve in hand, while those of his adversary are divided or dispersed over too great an extent of ground; the latter would be then placed at a serious disadvantage.

As in war a battle consists of several separate acts, divided by time and place, so it is in these exercises, and the manœuvres in two bodies will maintain their great utility if the following conditions are fulfilled, and the effect produced by the several arms considered.

1. That the ground chosen answers the purpose, and the handling of the troops is satisfactory.—(This is apart from the judiciousness of the general idea and the whole of the movements resulting from it, without reference to details.)
2. That the usual regularity enforced on the parade ground is never lost, or when necessarily disturbed by obstacles of ground or other circumstances, it is at once restored.
3. That the regular formation of the troops in divisions, brigades, &c., is not deviated from farther than is required by the unexpected peculiarities of ground and other influencing circumstances that occur in war.
4. That all the movements are executed (except in rare instances) at the usual marching pace.
5. That the different arms perform their duties, viz.—The infantry their attacks, the cavalry their charges, and the artillery the service of the guns as laid down in the Regulations.

By the neglect of these principles, on the other hand, the most awkward situations may result, and the primitive formation, indispensable to order, be lost.

The leaders of fractions, and of the several arms, will

have opportunities of acting independently during the steady and united progress of the whole manœuvre, and of taking intelligent advantage of any mistakes made by the enemy. By these means they will assist in attaining the end desired by their own side, and promote the accomplishment of the general idea. The interest in the exercises, which for want of stimulus would necessarily flag, will thereby be sustained and increased, even in the lower ranks.

II.—*Special Instructions for directing the Manœuvres.*

A. Manœuvres of a division and of a *corps d'armée* against an enemy represented by small detachments of troops (skeleton enemy).

The object of these manœuvres is to exercise the senior officers, as if on actual service, in moving large bodies of troops with order and according to the features of the ground; they should consequently never degenerate into mere drill.

It will only be necessary in future to notify for the manœuvres of a division or of a *corps d'armée*, the general idea and rendezvous of the troops.

It rests with the commander to decide the moment when the manœuvre ends; he should not communicate to the troops either dispositions or instructions on this subject, but should carry them out by his own word of command, and by orders communicated verbally through the staff. The enemy will be represented with his various arms, but not by troops drawn up in full force in order of battle. The plan (M) at the end of this book, with its explanations, is an example.

B. Manœuvres in the field.

1. *Preparations for the manœuvre.*—The officer commanding in chief conceives, first, *the general idea*. This

indicates in a general manner the supposed hostile attitude of the forces operating against each other. It is consequently the same for both sides. Secondly, *the special ideas.*

Those define the particular circumstances for the guidance of each side, while they indicate the object to be attained.

Supposititious Troops.—It is absolutely necessary that supposititious troops—that is, battalions and squadrons—represented by flags, should not be taken into account within the field of battle. A manœuvre becomes certainly more interesting and useful according as the relative strength of the opposed parties varies; but, if to bring this about, simulated troops or flags are employed, they must not be made to rise, so to say, from the ground, but should appear from beyond the limits of the field of battle, and have their approach signalled to the adversary at least as early as he would learn by his patrols, &c., that of real troops.

Supposition of ground.—Suppositions as regards ground are no longer admitted. The ground must always be considered as it really is.

Promulgation of the special ideas.—Special ideas should only be given out for one day, because the new situation can only be defined by the commanding general according to the position occupied at the end of that day. Special ideas may be prepared for the series of manœuvres in a general manner, but they must only be definitely drawn up and announced on the day immediately before being carried out.

Dispositions of the Commanders.—The commanders of the opposed sides decide on their own line of action, based upon the general and special ideas given, and they submit their plans to the commander-in-chief, whose interference

is restricted to modifying these dispositions when they are opposed to his special idea. The commanders must always notify in their reports the rendezvous, the places where they await orders, the direction to be taken in case of retreat, and the order of battle.

2. *Influence of the commander-in-chief on the course of the manœuvres.*—The commander-in-chief allows perfect freedom in carrying out these dispositions. He interferes when he wishes to alter the situation of both parties, but then only by means of a new special idea, or he may do so when the situation has become so altered by the course of the action, or by the decision of the umpires (*see* paragraph 1 of the rules laid down for manœuvres), as to render it necessary to give a new direction to the manœuvre.

3. *Criticism on the spot.*—The general commanding in chief will pronounce his opinion on the performances at the end of each day; he will therefore be very particular in following as closely as possible the course of the manœuvres to enable him to form an estimate of the leaders, of the conduct, discipline, and general bearing of the troops, and of the instruction they have received. To help him he will, when required, have the advantage of the observations of the umpires. In case of any unusual complications it may be advisable to interrupt the course of the manœuvre for the moment in order to explain the result that would occur in actual warfare, and to restore order should it have been lost. When this is to be done the "general halt" will be sounded, which must be repeated by all the trumpeters and buglers: the firing will then cease, and the troops of all arms halt on their own ground; the infantry will pile arms, artillery and cavalry dismount; the skirmishers and flankers remaining out.

On the "call" ("ruf") being sounded, commanding

officers, including commanders of battalions, squadrons, batteries, and detachments will, with their adjutants,* repair to the commander-in-chief at the spot from whence the sound came.

The movements will only again proceed when the "general advance" has sounded.

4. *End of the day's manœuvre.*—If during the course of a day's manœuvre one of the commanders thinks he has fulfilled the task allotted to him, or has become convinced that he cannot accomplish it, he will report accordingly to the general commanding, stating at the same time what line he proposes to take up for his outposts, and where he means to bivouac. As soon as he has received sanction for this he should take the necessary steps to break off the engagement and establish his outposts. Behind these the troops may, if necessary, have a short rest. The general in chief command may, however, at any time, if he sees fit, bring the operations to a close for the day, and decide on the line of outposts for both parties. The transition from action to a camp with its outposts, &c., as on service, forms a very important part of the instruction, and must not be passed over by a conventional cessation of hostilities.†

5. *The close of the manœuvres* will be notified on the last day by the "general assembly" and "appel" sounding.

6. *Criticism at the end of the day.*—Commanding

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* An A.D.C. is also styled an adjutant in Prussia (*Translator*).

† As an exception to the general rule, should it be undesirable to bring the action gradually to an end, and encamp as would be done on service, the termination of the manœuvre will be announced by sounding the "general halt."

officers will assemble on the "general all" being sounded at the end of each day's manœuvre to hear the "critique" of the general in chief command. In order, however, that the troops may not be delayed in taking up the line selected for the outposts and in reaching their camping ground, the officers detailed for outpost duty will not be required to attend, and an officer of superior rank told off beforehand will march the troops to camp, the senior captains taking command of their respective regiments and battalions. The commanding officers must afterwards in bivouac inform their officers of the remarks made by the chief in command.

7. *Influence of cantonments on the manœuvres.* When all the troops are to bivouac, as is the rule when one whole *corps d'armée* operates against another, the issue of the manœuvre will be entirely left to the plans of the respective leaders; but when the troops at the end of a field-day are, for their better accommodation, to go into cantonments (which must be provided with the co-operation of the civil authorities, and with due consideration for the proprietors of houses), the leaders must have their freedom of action somewhat limited—not, however, to such an extent that a pre-arranged result can be expected, or that at the conclusion marches be made to the cantonments or lines of outposts taken up, which in actual war would be inconsistent with the state of affairs; the manœuvres must be conducted in this, as in every other respect so far as is practicable, like those on a real campaign. Troops are not, as a rule, to march more than fifteen or twenty (English) miles a day, including the manœuvres.

In carrying out these arrangements, and in the establishment of magazines for provisioning men and horses,

the officers of the staff will have opportunities of showing their efficiency. Should the commander-in-chief be induced, by bad weather or other reasons, to move the troops into cantonments instead of into bivouac, those cantonments must be compact, and such as would be occupied in a real campaign, and be determined upon on the field itself at the end of the manœuvre. The chief in command will point out on a map the circle to be occupied, and the distance of the cantonments from the line of outposts. He will apportion to divisions and brigades the sections they are to occupy, and determine the place of general assembly in case of alarm. The distribution of the troops into quarters and the appointment of their several alarm-posts will be left to the subordinate officers. Arrangements having been made for conveying provisions, straw, firewood, &c., to the troops, the only question to be considered is that of quarters, and the several villages and farms will then be available for whole battalions and squadrons. Shelter for horses, for whom no stabling is available, will be found behind buildings.

The military police will be particularly strict and careful in the performance of their duties, for the prevention of fire or other injury to property.

The troops, whether in bivouac or quarters, will be protected by outposts in bivouac; they will consider themselves as on actual service, and confine themselves within proper limits.

8. *Directions for the Waggon-Train, Carts, &c.* It is important that the troops receive their camp requirements on the bivouac ground as soon as possible. Considering, however, that the latter cannot be known beforehand, the trains can only be drawn up at convenient places, according

to the probable issue of the operations, and outside the field of manœuvre.*

In cases when whole *corps d'armée* are operating against one another, it will be especially advisable to park the trains at different points, so that the whole may not pass along the same road.

The places where the trains are parked must be made known to the commander-in-chief beforehand, who, as soon as he perceives the probable issue of the day's proceedings, will give orders as to the direction they are at first to take, and the commanders of the opposing forces will, as soon as the bivouac ground has been approved of, take such measures as will ensure their speedy arrival.

III.—*Conventional rules necessary for Manœuvres in the Field.*

A. Decision on the engagements, and interference of the commander-in-chief during the progress of the manœuvres.

1. Considering that in these peace exercises neither the courage of the troops nor the effect of their arms are brought into play, as would be the case in war, it must be left, in a great measure, to the intelligence of the officers to judge what would have been the result of the attack or of the defence of a position. It will doubtless happen that the views of officers opposed to one another differ; in such cases, and to shorten the contest for the possession of villages, &c. (which in actual warfare would probably occupy several hours), it is necessary to come to a decision. To give this decision in each separate case, and at the

* If, from unforeseen circumstances, in the course of the manœuvre, the troops have to pass these trains, they are to be considered as natural obstacles, or other impediment, and not liable to capture.

same time to leave the leaders otherwise unrestrained, is the duty of the umpires. They will give their opinion according to the existing state of affairs only, and without reference to the turn their decision may give to subsequent operations, or its conformity to the general idea given by the commander-in-chief.

The umpires are to determine—

a. If a force is to retire.

b. If it is supposed to be captured.

c. If it is supposed to be cut off.

d. If it is temporarily, and for how long, to remain inactive.

In cases *b*, *c*, the troops are to return at once to their corps, and take no further part in the day's operations; in case *d*, they will retire behind their lines, and there wait the appointed time.

The commander-in-chief and the leaders of the opposing forces must at once be informed of such decisions, in order that they may take measures accordingly.

Except in cases where His Majesty is pleased to appoint special umpires, the commander-in-chief will himself undertake the duties. Considering, however, that in extended operations he cannot be expected to be always at hand, he may appoint to assist him one or more officers of rank, whose names are to be previously notified to the troops.

B. The effect and speciality of the different arms and the nature of the country must be appropriately considered.

2. Troops are not to engage in volley-firing at a less distance than 250 paces; skirmishers on a plain never nearer than 200 paces; and a charge or attack with the bayonet is to halt at 60 paces from the enemy; so far they

must always be led with the energy required by the Regulations, or they will not be taken into account. Cavalry and artillery must not be halted while exposed to the effective fire of infantry; cavalry and infantry are not to deploy where they would be exposed to an effective fire of grape, nor are skirmishers or artillery to be sent unprotected across a plain commanded by the enemy's cavalry; and so on.

3. Guns limbered up, that are not yet or are no longer in action, if without or with too weak an escort, may be captured by skirmishers or by cavalry.

4. In the event of an advantageous position—a defile, for instance—being such that it might, by superior numbers, be forced in front, and allowing that measures of defence have been judiciously taken, it does not follow that in war the first attack would be successful. In the manœuvres therefore, the defenders must, previous to an attack with the bayonet, be shaken by a superior fire. This will often require to be repeated, in which case the attacking troops must be retired as far—for the purpose of reforming and, if necessary, of being relieved—as if the attack had been made in real earnest. An increased fire of artillery and infantry should prepare the way for a renewed attack, and the assault with the bayonet made with, if possible, a stronger force. Should the number of fresh troops at hand permit, it may be advisable to make repeated attacks at short intervals. It is difficult in these exercises in time of peace to represent a decidedly successful cavalry attack. A thoroughly-defeated cavalry would, in actual war, only reappear on the field of battle after some lapse of time, or perhaps indeed not at all.

Infantry and artillery, against whom cavalry has been successful, will generally be unable to take further part in

the action. It is the duty of the umpire to decide on the extent of a success, and that of the victor to follow it up with a right comprehension of the state of affairs. These moments sometimes afford opportunities for the display of prompt decisions and of brilliant feats of arms: the umpires are therefore to give their utmost attention on such occasions. The prevailing practice of two opposing bodies of cavalry clinging to one another in deployed lines, and charging repeatedly at short intervals, must not be permitted. The beaten cavalry is always to retire at a trot; and if the cavalry that has been declared victorious follows, it must be at a walk, and at 500 paces distance.

6. A battalion in square, and which cannot yet be considered as shaken, must not be attacked by a single squadron; an attack may be undertaken by three or four squadrons, but in such a case the charges must be made in quick succession, and if possible from different sides.

C. Instructions for the prevention of accidents, disorder, or damage to property.

7. To guard against injury from ammunition, a distance of 60 paces must absolutely be kept between the combatants, the leaders of whom, should they accidentally approach nearer, must immediately call a "halt," "order arms," or "return swords." The umpire will then determine which side is to retire, and the pursuit by the victorious party will only be made at the prescribed distance for engaging.

8. As no firing can be permitted in the immediate vicinity of buildings, barns, &c., the defence of villages can only be represented by lines of skirmishers along the distant garden fences, and by attacks with the bayonet from masses in reserve. The parties that would be placed inside houses, farms, churches, &c., are to be posted near

them only, and instructed by their officers how they would have to act in real war.

9. The breaking up of a bridge can be imaginary only, and the umpire will determine the time supposed to be required for its repair.

10. Cornfields, enclosed meadows, and plantations, are not to be crossed by troops, and railways only at the proper crossings, and with necessary caution. These features of ground are nevertheless only to be considered as obstacles to freedom of movement in a tactical sense, if they are so naturally, and irrespective of the protective measures of the police—viz., meadows when marshy, plantations when very dense, lines of rail when on embankments or in cuttings. A body of troops passing over a railway crossing on a level with the open plain, cannot be considered in the act of defiling, because in real warfare they could move with an extended front. In a manœuvre, therefore, neither the time occupied, nor the formation adopted to effect the crossing, is to be taken advantage of. The directing officer will be held responsible for all damage done by the troops, unless relieved from such responsibility by higher authority.

D. Dress of officers attending as spectators.

11. All officers attending the manœuvres as spectators will, to distinguish them, appear without sashes. The umpires will wear the sash and a white band round the left arm above the elbow.

PART II.—Execution.

IV.—*Effects of Prussian firearms—Difference between the Needle-gun and the Minié Rifle, and the tactical consequences.*

The effects of the Prussian field artillery and of the needle-gun at various distances, are shown in the annexed table,* they are given in order that the range may be taken into account in the course of the manœuvres; and it is here necessary to bear in mind, that only the Prussian infantry is armed with the needle-gun; all other armies have adopted the Minié or other rifle on a similar principle. It follows therefore that while in the manœuvres the Prussian infantry is opposed to needle-guns, it would on actual service have to encounter the Minié rifle.

The army knows both rifles by experience; only a few words are therefore necessary to point out where the chief difference exists, the tactical consequences which result, and their disadvantageous influence on the utility of the manœuvres.

In range and accuracy the two rifles are nearly equal; the superiority of the needle-gun lies only in the rapidity of its fire. It is capable of being discharged, without hurry, three times as fast as the other. Four to five shots can be fired from it in one minute, while the Minié can fire at the rate only of one-and-a-half shots in the same time. It can be loaded moreover by the soldier in a lying-down position, thereby enabling skirmishers and small parties in close order to cover themselves in the open

* Not given in this translation, the range bein much the same as British rifled arms.—(*Translator.*)

—an advantage their opponents are deprived of, owing to their being obliged to stand up to load after each shot. These advantages of the needle-gun are so predominant, that although the Minié is expressly constructed for musketry engagement, those armed with it must avoid such an adversary, or seek safety in a combat with the bayonet; a bayonet attack, however, in the open field, is out of the question, for at 500 paces it would come under effective fire. The enemy armed with the Minié would therefore, before crossing bayonets with their adversary, receive sixteen rounds, each more deadly than the preceding one. The Minié rifle must accordingly avoid the open, and choose its battlefield, under all circumstances, in a close country. The columns of attack will then find shelter, while advancing, for a longer time, and when they do come under fire will have a shorter distance to traverse, and be exposed to a less number of rounds. It comes to this, in short—that owing to the rapidity of its action, 300 men armed with the needle-gun can deliver a fire equal to that of a battalion 900 strong armed with the Minié, and be liable, moreover, to fewer casualties on account of showing a smaller front.

The needle-gun enables one therefore to prolong an action, economise one's forces, ammunition, &c., and fight in deeper order than the enemy—*i.e.*, with more lines one behind the other; it enables one also to reckon on more troops in reserve, and without numerical superiority to act on the flank of the enemy while keeping him fully occupied in front.

The problem for the future tactics of the needle-gun will therefore be—

1. To tempt the enemy into an engagement, and keep him engaged.

2. To get him, if possible, into the open.

3. To fight in deep order, but so that the front can at any moment be extended for the attainment of great and speedy successes.

Considering that the manœuvres will be the more instructive the more faithfully they represent real war, it may be asked if the above three conditions, which, in a combat in earnest, must have very decisive results, would equally apply where both sides are armed with the needle-gun.

With regard to points 1 and 2, the answer must be in the negative, for it is impossible to execute them without putting the needle-gun into contradiction with itself. As regards point 3, both sides at the manœuvres being armed alike, the deep formation can certainly give no advantage or lead to any satisfactory result, but its formal practice cannot affect the needle-gun. As, therefore, the deep formation includes the formations of elementary tactics, which are drilled into the soldier and are second nature to him, it is recommended to be introduced at the manœuvres.

V.—*Manner of conducting the respective opposing forces before engaging the enemy.*

The strategical base must be preserved in a manœuvre, and never be forsaken except on compulsion.

It is not sufficient to meet and fight. The important point is to know where, when, and how to do so. It may be strategically necessary to postpone an engagement or to avoid one altogether, even when a favourable result is scarcely doubtful; for a victory costs time, and this, in war, is sometimes of more value than a victory. Such cases

as these will afford opportunities for real manœuvring, profitable lessons for the leaders, and be a faithful imitation of war; they must therefore be sought for by a correct appreciation of the mutual strategical position in the manœuvre.

This certainly has its difficulties; for one has to reckon on an unknown and always altering force—unknown, because the intentions of the enemy cannot be penetrated, but conjectured only; altering, because at every step that the hostile forces approach each other, the relative situation as to time and locality changes. But these difficulties, arising as they may in the course of events, serve also to heighten the use of the exercises.

At first, and when news of the enemy is wanting, the state of affairs can be least comprehended. The dispositions to be then made should be only those actually necessary at the moment. It would not do to scatter the seeds of misunderstanding and counter-orders from the very commencement. The rule at this period of the manœuvre is to have a well organized advance and rear-guard, correct information as to ground, a concentrating order of march, a formation admitting of rapid deployment, and the reserves of cavalry and artillery so ordered that they can be moved forward with facility. It is only when the collected information allows of a clear comprehension of the state of affairs that the moment has arrived for completing the dispositions. The commander will then be able to decide—

If he should avoid an action;

If he can still avoid one, and, if so, how;

If he must fight, and, if so, where.

Should he be advancing, he will be best able to decide on his plans by accompanying the advanced guard. He

will there see matters with his own eyes, and his orders will reach the troops the sooner. He will do well to remain with the advanced guard while the staff are carrying his orders, lest the aspect of affairs should alter.

Opening the Action.

In opening an action the following rules apply.

A.—General rule.

The order of battle prescribed in the Regulations is that from which the extension of the troops and their relative situation to one another must always be developed. When this order is departed from, and separations, detachments or a greater expansion, &c., are made, the object in view must be carefully considered, and the deviation regarded as an unavoidable evil never to be had recourse to without good reason.

So soon as the necessity for the deviation ceases, the primitive order must be at once reverted to.

B.—The defence.

1. Defensive positions must be chosen when possible in such manner—

a. That the defenders can be kept under cover until the very moment they are required.

b. That they have a clear view to their front.

c. That the front of the position is perpendicular to the line of retreat, or at all events not very oblique to it.

d. That, where the locality favours, accidents of ground should be taken advantage of to strengthen the front and flanks. If there should happen to be no natural support for a flank, it will always be better secured by reserves in rear than by an extension

beyond due limits. On a plain the flank should be secured by rifled guns.

2. In the case of positions behind defiles the dispositions should be such that the defile is conducive to the defence. This may be effected by one of the four following methods:—

a. By the direct defence of the pass itself.

b. By attacking with superior numbers the separate columns of the enemy, should he have divided his forces.

c. In the case of the enemy having traversed the defile in one column, by attacking him before he has had time to gain sufficient ground to deploy.

d. Finally, when the defender makes an attack on the enemy so near to the defile that the latter has only the one line of retreat close behind him, by obliging him to take up a line of battle oblique to the line of retreat; this result the defender can almost always insist on because he has himself no defile at his back.

The defender must endeavour to secure one of these advantages; how far he may have done so must be judged by the result.

C.—The attack.

1. The turning of both flanks of the enemy at the same time can only be justified by great superiority of numbers, and is even then very seldom advisable.

2. The turning of even one flank, by means of a detachment, always argues a decided superiority.

3. On the other hand it is practicable to throw one's whole force on one of the wings of a superior enemy, and with more effect than by a simple attack in front. To this end it must be supposed that the assailant

a. Has nothing behind him to cover.

b. That he can open a new line of operations and of retreat.

c. That the locality permits of maintaining one or more points in front of the enemy in order to insure his own line of retreat.

d. That the ground occupied by the enemy allows of an attack in which the assailant has the shortest lines of communication.

4. The enemy's centre may be pierced when one is certain of being able to bring more troops than he can to bear on a decisive point, and when the conditions of ground at this point are such that, all things considered, the superiority which the assailant requires is, for the time, on his side.

5. When the ground permits, the cavalry can with its necessary complement of horse artillery, make turning movements and send off detachments. The conditions in such a case, are—

a. That the assailant does not require for his own defence the cavalry he would detach.

b. That the locality favours the detached cavalry, so that it may be able to fall back on the main body under any circumstances, though it may be, by a detour.

c. That the point of attack assigned to the detached cavalry be such, that a certain effect may be relied on, be it by means of its artillery fire or by the sword.

6. Turning movements, intended to induce an adversary to retire without fighting can only be effective when it does not suit his convenience to fight a general action. If he is able and willing to fight, he will seize every oppor-

tunity of attacking an enemy whose forces are disconnected, the usual consequences of turning movements. A turning movement of this nature is only appropriate, therefore, when one knows that the enemy must retreat, and when one desires to hasten or render his doing so difficult. Considering that the assailant and the defender start each from a base, and have a line of communication to cover, each should, in the possible contingency of a retreat, notify the points on which it should be directed, and the attack must be so combined that this retreat is rendered possible.

Phases of the Battle.

A.—Economical employment of the troops.

1. The modern art of war shews in greatest force on the field of battle. Its aim there is to engage the enemy as much as possible, but with the fewest possible number of troops, and to exhaust his strength and his reserves by protracted engagements, while preserving one's own intact. Should this succeed, to strike at the most sensitive point, throw the enemy into disorder, and pursue his routed troops to the utmost. In this manner results have been obtained at a single stroke which former wars of many years duration could not boast of. The gist of these tactics lies in a wise economy of force, and in calculating on a contrary course on the part of the adversary.

This calculation cannot avail those who do not remain concentrated in front of the enemy, who make too many detachments, deploy too soon, extend too strong a line of skirmishers in order to dispute every foot of ground, and thus expend the reserves—in short, those who, as frequently happens in manœuvres, scatter their forces before the proper time without method; and when the crisis of the

battle comes upon them have scarcely anything at their disposal but swarms of unmanageable skirmishers.

3. The needle-gun is better adapted to these modern tactics than any other weapon, for the superiority of its fire enables one to be sparing of troops, allows of a deep formation, and of economising the reserves; moreover the efficacy of its fire gives greater effect to the last effort.

The tactical formation to render this economy of force effective is company columns in the hands of battalion commanders, with a not too numerous line of skirmishers, whose fire is rendered more efficacious by the little volleys of the supports.*

B.—Influence of rifled arms.

This depends on nature of the ground:—

1. A hilly, close country is unfavourable to the employment of rifled artillery, and reduces the range of rifled arms to that of smooth bores. The relative conditions of a battle will here, therefore, remain the same as formerly.

The Minié rifle has on such ground no advantage over a smooth-bore.

The needle-gun maintains the superiority of three to one in file firing. The amount of its effect, however, is diminished by the shorter range.

On such ground, turning movements, while occupying the enemy in front with a reduced force, as already mentioned under head IV., promise the best results on account of the turning detachment remaining a longer time concealed from view of the enemy.

2. The open plain is the real field for rifled arms.

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* The Prussian supports move up to the line of skirmishers and fire volleys in close order.—(*Translator.*)

They there attain the full development of their superiority, and range far beyond what has up to the present time been considered the limits of tactics. It is now essentially necessary to prescribe these new limits rather than to purchase experience at too high a price.

The defence is an easy task. The endeavour should be as far as possible to place the troops under cover in hollows, behind undulations to be found even in the most open plain. The cavalry and reserves should take up such positions as will enable them to deploy easily on the flanks.

The wings should lean on batteries of rifled guns, having a free range to the front and flanks of about 3,000 paces. If the range is less, it will be to the advantage of the enemy. Such a disposition was formerly considered weak, if not faulty; now, owing to the effect of rifled arms, it is considered the strongest,—indeed, it so far surpasses the so-called *positions* that it has no weak side, and consequently cannot well be turned.

It enables one to perceive within a quarter of a mile (German) all the dispositions of the enemy for the attack, and not only to see, but to bring a destructive fire to bear upon him. The space to be gone over by the assailant under fire, is double now what it used to be. Where in former days it required a quarter of an hour's march to reach the enemy, it now takes half an hour. Two-thirds of the distance the assailant is entirely defenceless under the fire of rifled artillery, and one-third of the way he is under volleys from rifled musketry. It will be fortunate for him if these latter do not happen to be needle-guns. Artillery would certainly gain ground faster were it not tied to the movements of the infantry. It would be a fault to support it with cavalry. The cavalry of the

defensive side, whose field is also the plain, is in the meanwhile on the look-out. It has here every facility to deploy and fall on the enemy's disordered troops. It reserves itself for this the decisive moment which may be expected almost with certainty.

Should the attack be conducted according to the tactics which have hitherto prevailed, viz. deployment on an extended front, advance, fire by successive lines, and finally an attack with the bayonet, a glance at the table given at page ,* will show that the loss must be very great. Such an attack can have no good result, and when it fails, how, it may be asked, is the retreat to be effected.

Equally fruitless would turning movements be in the face of an enemy. The latter would detect them at once, and, as before mentioned, easily frustate them. There is, therefore, nothing for it, but either to manœuvre the adversary away from the open, to a close and favourable country for the defence, or to make an attack at dusk, or at night.

3. What has been said under heads 1 and 2 of this section, regarding a close or covered country, and the open plain, applies also to a country combining the two, such as is frequently met with under the present system of cultivation.

The defensive side retains the advantage, if the commander has the sense to post his troops in such manner that his adversary is compelled to traverse the greatest possible amount of flat and open ground to reach him. In any case, however, the assailant will have a better field as well for the attack in front, as for pressure on the enemy's flanks.

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* Table of range omitted, being much the same as in the British Service.—*(Translator.)*

He must, especially, by taking skilful advantage of ground, endeavour to reach under cover, a position for opening the attack. His smooth-bore batteries and his infantry can thence move into action without risking the serious consequences before alluded to.

If the infantry is armed with the needle-gun it will engage in skirmishing order, lie down on the open, and keep up a continued fire.

Small volleys are employed with advantage against the borders of woods at a distance of 500 to 600 paces, then successively at shorter distances, until the subdivisions, closing on each other, advance to the attack.

Villages surrounded by gardens, hedges, pailings, houses built of clay, are to be acted upon in the same manner by volleys from small parties.

These small volleys, especially if converging from various points, may have, even at a distance of 700 paces, a trifling and indirect effect against an enemy massed under cover of hedges, hillocks, walls, earthworks, redoubts, &c.

C.—Reports.

It is not sufficient for a commander to send his orders to his subordinates; he must be sure of their punctual delivery, and of their being understood. He must also be kept *au fait* as to the progress of their execution. This can only be effected by means of consecutive reports, each noted with the exact moment of despatch and numbered accordingly. A neglect of this control may bring discredit on the best arranged plans, and has indeed already compromised whole campaigns. This applies especially to the commanders of isolated detachments, advanced guards, rear guards, &c., and it is the duty of all officers, holding independent commands, even on the field of battle, to

keep the commander-in-chief continually informed of all that occurs of importance within the range of their commands, and more especially so when compelled by force of circumstances to deviate from the orders and instructions received. Many of these reports must be made verbally, and many also both verbally and in writing, according to their importance. They will be best conveyed by aides-de-camp and orderly officers, mounted on fast horses.

VI.—*Command of the advanced guard.*

The business of the advanced guard is to clear the way for the main body following it, to screen and protect its march, to reconnoitre that of the enemy, and if necessary, to keep him in check until such time as the commander-in-chief has taken his measures.

Strength and Composition.

The advanced guard may be obliged to fight either on the offensive or defensive. It requires therefore a degree of tactical independence and a corresponding mixture of all arms. The latter must be proportioned to the situation relative to the enemy and to the nature of the ground. The strength is generally from one-sixth to one-fourth that of the whole force.

Distance from the Main Body.

The distance of the advanced guard from the main body varies. At too short a distance the main body is in danger; at too great a one it runs a risk itself. The danger diminishes or increases according to the ground and the strength of the enemy. The proper medium must be left to the discretion of the leader. To fulfil his

task satisfactorily he must direct his energies chiefly to four points:

1. To measures of security on the march;
2. To the obtaining of early and certain intelligence of the enemy;
3. To the acquirement of a knowledge of the ground, and to a profitable employment of the same;
4. To making proper dispositions on coming into contact with the enemy.

Measures of security on the March.

These measures consist in a chain of patrols with their supports, which cover and accompany the front and flank of the advanced guard. The front must be so extended as to cover the breadth of the main body following in rear, and the flanks so deep that they secure the space between the advance guard and main body.

The description of troops which should perform this service varies according to the nature of the ground. In a covered country the numbers of patrols are increased and placed farther off. These patrols form moveable pickets, so to say,—they reconnoitre the ground during the march, without, however, losing time, distance or connection; and they report anything suspicious. If danger is imminent, they open fire.

Obtaining early intelligence of the Enemy.

These defensive patrols do not, however, at all suffice for the important service of procuring news of the enemy.

They answer as measures of security against ambuscades and surprises, but to penetrate the enemy's design requires other means of a more active and intelligent

nature. The object is to be able at a glance to divine the intentions of the enemy from his strength, mixture of arms, direction of march, &c., to measure rightly the distances, to calculate the time required to march over them, the consequent dangers that may result, and to make a fitting report upon the same. This is beyond the capacity of non-commissioned officers and privates—indeed, it would be dangerous to suppose that it is not so.

This service can and ought to be performed only by able well-mounted cavalry officers, assisted by intelligent orderlies and protected by cavalry according to circumstances. They are the eyes of the commanding general, and the success of entire operations depends upon the information acquired by them. Too much pains and practice cannot, therefore, be bestowed on this branch of the service and on its proper organisation. The requisite number of officers proceed to the van of the advanced guard to be at the disposal of the officer of the general staff who accompanies it, and whose particular duty it is to explore the country and reconnoitre the enemy. This latter officer allots them their respective tasks, according to the locality. Their reports are sent back to this staff-officer, who collects and compares them, that he may be on his guard against false news. In the latter case the truth will be ascertained by these officers. He will report anything of importance back to the commander of the advanced guard, who will communicate it to those concerned according as may be necessary.

Reconnoitring the Ground.

Not less important is an accurate reconnaissance of the ground as regards road communications and their uses in an action.

The staff officer with the advanced guard is also responsible for the practicability of the roads, and a party of pioneers must be attached always to the van of the advanced guard under an officer who directs the necessary repairs. The distribution of this party is so arranged, that at least one-half follows while the other half works. When necessary, infantry may be employed with them.

The reconnaissance of the ground is the duty of the commander of the advanced guard himself, assisted by his staff. They must bear continually in mind that the enemy may attack and drive back the advance guard.

They must notice all points that may be either dangerous or serviceable to the retreat, such as bridges, defiles, water, woods, &c., and reconnoitre accurately all positions in which they can make a stand for a time, or those where the main body can engage the enemy.

They must of all things consider and continually bear in mind how under such circumstances to dispose of the troops, the points on which to lean the flanks, the practicability of roads, &c., so that they may be ready at any moment, in case of necessity, to make dispositions and give a helping hand to the commanding general.

Dispositions of the Commander of the advanced guard on falling in with the enemy.

In case of the advanced guard falling in with the enemy the commander must (should he not have already succeeded by the means indicated under head 3) especially ascertain what he has before him; whether it is the advanced guard or the flanking party of a strong or of a weak force; whether engaged in an offensive march or in a defensive position; on which roads, at what distance, &c., in order that he may take his measures accordingly.

There is not much time to spare for all this: what has to be done must be done quickly, and should have been anticipated. The readiest means of procuring early intelligence is to make prisoners, and this may be done by cutting off the enemy's detachments on first falling in with them.

Should this not succeed, stronger detachments, ably commanded, must be pushed forward, and cavalry officers, as recommended under head 2, are best fitted for this service. The advanced guard advances meanwhile in the most advantageous order, viz. in echellon, and proceeds to reconnoitre the enemy without seriously committing itself.

If the commander is convinced that he cannot continue his march, he should make his dispositions according to the observations he may here make of the ground (as mentioned under head 3) and await the further orders of the general commanding in chief.

If the latter desires to give battle either on the ground taken up by the advanced guard or in a position he has himself selected farther back (see head 3), it is important that the advanced guard prepare the battle-field for him, *i.e.*, occupy its important points before the enemy can do so, especially those in front (for instance, farms, woods, &c.), and hold on to them until the arrival of the main body.

The needle-gun in position under cover can here do great things, if *there is enough ammunition.* It is of course indispensable for mutual security that the conveyance of orders and information between the main body and the advanced guard, should be safe and rapid.

VII.—*The rear guard.*

The business of the rear guard is to cover and secure

the retreat of the main body. It requires therefore a relative strength, a degree of independence, and a proportion of all arms, modified according to the nature of the ground.

The measures of precaution during its march are the same generally as for the advanced guard, but in inverse order (see heads 1 and 2). The same rules apply as regards distance from the main body. The commander must not be thrown back on it, or allow himself to be cut off.

The closer he is pressed after an unfavourable engagement the more difficult is his task; such an occasion requires a correct knowledge of the ground and an able commander in action.

He must have the judgment to hold on at the right time, and also at the right time not only to retire, but to disappear.

If he commits the too common fault of endeavouring to defend every foot of ground, he will lose time, be held engaged in front, and turned on the flanks. If on the contrary he knows how to withdraw himself betimes from view of the enemy only to be sought after afresh and then found again in strong positions, he will be able to make head for hours against the enemy, gain time for his side, and be master of his troops.

Staff officers, with the necessary orderlies, proceed in advance to reconnoitre such positions, and to point them out without loss of time to the troops that follow.

When defiles have to be passed—bridges, for instance, —the reserves will establish a *tête du pont* in the strongest possible position, at the end next the enemy, and sufficiently spacious to enable the troops that follow to be drawn off safely under its protection.

The troops that have passed over, then occupy the

opposite bank to enable the reserves in their turn to retire. The pioneers make preparations for the destruction of the bridge, which they carry into effect so soon as the last man is over. Dams and causeways leading over swampy ground require a similar procedure.

If the route leads through woods, which although practicable for infantry are difficult for cavalry or artillery, the latter must be passed through as best it can while the infantry holds the borders; when this is effected the infantry disappears under cover of the wood.

Places where cavalry and artillery have the same difficulty in passing round, must be dealt with in the same manner. It may be necessary for the retreat of the rear-guard, under certain circumstances, to set fire to such places when leaving them.

The commanding general must be kept continually informed as to how the rear-guard is getting on, so that he may, in case of necessity, go to its assistance.

VIII.—*The Commander of Cavalry.*

Order, power and rapidity, are the attributes of a good cavalry; prompt judgment of the situation, quick decision, and rapid, daring execution, are the qualities necessary for the leader.

The leader must inspire the spirit of the enterprise—he must, so to say, burn for it. He ought to have freedom to act, and if he has not, he should be ready to take it upon himself. If he reports first, ask for orders what to do—in short, if he waits to learn from others what he should see to and decide on himself, he will invariably miss the favourable moment.

Infantry in line or in shaken columns, artillery limbering or unlimbering, cavalry deploying or exposing its

flank, are the opportunities for his attack, and his certain prize if he can take them unawares; it is however but the affair of a moment. To perceive these opportunities, the commander must neither remain actually beside his cavalry, nor ride about too much. He should stand quietly at suitable spots, because the more he gallops about, the less he will be able to see and observe what is going on.

His dispositions for the attack are made by means of aides-de-camp who convey his orders. He remains quiet himself that he may not lose an opportunity. He must give his continued attention to the movements of the enemy's cavalry, as well as to the progress of the whole manœuvre, in order that he may be able, not only to perceive the weak points and difficulties of the enemy when they first become apparent, but that he may even anticipate them.

In such a manner only will he find leisure to discern opportunities and favourable ground to precipitate himself on the enemy unawares, with suitable force and front; he will, in short, be in a position to decide how best to act. This will be a better course than to seek after petty successes, to the loss of great opportunities; better than to waste time against mere companies, when a battle might possibly be won.

He must appoint officers especially to ascertain the practicability of the ground, and to keep him informed of the strength and whereabouts of the enemy's troops.

His particular duty is to ascertain all that happens on the battle-field, and under certain circumstances to employ force for this object.

Any attempt at a turning movement on the part of the enemy should on no account escape him. His arm of the service is the most appropriate to check or avert a threat-

ening danger of this kind, and he should make use of it when necessary, on his own responsibility.

Cavalry attacks always in line, but manœuvres in columns. To deploy too soon is a very great mistake, because extended lines cannot be kept under cover, are open to surprise, and are a mark for the enemy's artillery. They cause loss of time in their unwieldy attempts to move, lurch to and fro, get into disorder, and end in missing the right direction. The column is the only formation that is adapted to march directly and rapidly on the point* whence the attack must be made. It can take advantage of undulations of ground to keep out of sight of the enemy and to avoid his fire. It can easily evade difficulties of ground and attain a desired position before the enemy suspects it. It then deploys rapidly, having a clear course of from 800 to 1,000 paces before it. The second line in column projects from the first line at such an angle that in case of the latter being beaten it may fall obliquely on the flank of the pursuing enemy.

If there is time, the horse artillery prepares the way for the attack, but the favourable moment must never be lost for the sake of a cannonade.

It is a glorious tradition, and one that every dragoon officer should bear in mind, that cavalry never awaits the attack at the halt, even when inferior in numbers, but advances against it.

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* This point is on the flank of the enemy's cavalry. It is difficult to choose the proper direction at the right moment, and this is an exercise that requires continual practice. A manœuvre is not however necessary for this, the drill ground being in every way suitable.

IX.—*Outpost duties.*

Sect. 1.

Employment of the several arms on outpost duties.

Outposts form a portion of the advanced and rear guards, and are composed of one or more arms according to circumstances and ground.

Cavalry is well suited to scour an open country, and is particularly well adapted to watch this kind of ground by day.

Infantry is more suitable for night duty and for ground that is impracticable or dangerous for cavalry.

In foggy weather and on clear nights the service may be performed by a combination of the two arms, according to the nature of the ground.

The business of the cavalry is to watch in the distance and reconnoitre; that of the infantry to insure security in less advanced and in enclosed positions.

Artillery is employed on outpost service on special occasions, when it is important to hold certain points such as defiles, passes, &c., and to cover and protect water communications.

Sect. 2.

Object of outposts.

The object of outposts is—

1. To secure the troops encamped in rear from being surprised by the enemy.
2. To be informed of the position and proceedings of the enemy.

The first of these duties is performed by means of positions in advance, connected with one another, and by the occupation and defence of certain localities accessible to the enemy. The latter is effected by reconnaissances, *i.e.*, patrols varying in strength according to circumstances.

Sect. 3.

Composition of outposts.

Outposts are divided into several parts:—

1. Piquets, with their supports, detached posts, chain of sentries or videttes and patrols.
2. Reserve to the piquets.
3. Main body of the outposts.

These are all under the commander of the outposts, and receive orders from him only.

Sec. 4.

The commander of the outposts.

The commander of the outposts has the entire command of the troops detailed for outpost duty. In case, however, of the ground to be covered being very extensive, more than one commander may be appointed, according to circumstances; each to the charge of a section of the general line; they will act independently, but with regard to the general object in view. The commander makes his arrangements according to the instructions he has received. In the absence of orders, he decides on the line the outposts are to take up by day and by night, and determines the number of piquets,* supports and

* It is injudicious to assign too great an extent of ground to each piquet, as it renders the duty laborious and lessens the security. It is also unadvisable to have the piquets too weak; thirty to forty men will generally be the proper strength, and distributed nearly as follows:—

3 to 4 double sentries . .	18 men	to 24 men.
1 single sentry over the arms	3 „	„ 3 „
For patrolling . . .	8 „	„ 10 „
Non-commissioned officers .	2 „	„ 3 „
Bugler or trumpeter . .	1 „	„ 1 „
Total . .	32	41

A smaller number of men will suffice for the patrols of cavalry piquets.

reserves to be employed. He makes known his dispositions to the commanders of the several links of the chain, who move off with the necessary precautions to the positions assigned to them, preserving their connection in doing so. A curtain of patrols or small reconnaissances must screen these proceedings* as much as possible from the view of the enemy. If a battle has been fought and outposts are thrown out immediately afterwards, they should be established under the protection of those troops who happen to be nearest the enemy. Troops in such a position stand watching the movements of the enemy, ready for action, and mask the posting of the chain of sentries until accomplished. They are not to be withdrawn until this is done, and their commander will place himself in communication with the officer in charge of the outposts to this effect.

As soon as the several links of the chain have taken up their positions the commander of the outposts will examine them carefully and give the officers of the several piquets, &c., more detailed instructions for their guidance. He will change, increase or diminish the strength of the different posts, should he think it necessary, and carefully point out to the commanders the positions they are to take up at night. He must see personally that his orders for night duty are strictly carried out. He should keep himself in constant communication with the several posts by means of reports and orderlies, and learn through them what the enemy is doing. In the absence of news of the enemy or in case the information he has received is inaccurate, he will send

* Those had better be taken from the reserve, as it will be easier for them to find their way back to it.

out strong patrols or reconnoitring parties, especially towards daybreak, to procure more precise information. The troops encamped in rear should be warned of these reconnaissances that they may not be alarmed unnecessarily. The commander of the outposts will send any news of importance which he may receive of the enemy to the rear, and remain during the night with the main body of the outposts.

Sect. 5.

Piquet duty. The officer of the piquet.

a. Posting the sentries (videttes).

The officer of the picquet moves with necessary precaution to the ground apportioned to him, and posts his sentries (videttes) under the protection of patrols.

This should be done with a military *coup d'œil*, and without losing time about trifling matters. Alterations can be made later, and after a more careful reconnaissance.

He will observe the following principles in posting sentries (videttes).

1. That his connection with the neighbouring piquets is maintained.
2. That the sentries have as clear a view as possible towards the enemy.
3. That they be concealed as much as possible from the enemy. On the other hand, it is desirable that they be visible from the supports. This can be arranged by means of connecting sentries (signal men).
4. That roads and byways are carefully watched, especially by night.

5. That in carrying out these arrangements the fewest possible number of men are employed, and that advantage is taken of the ground to shorten the line, by embracing impracticable places within it.
6. That sentries in sufficient number are posted to prevent any one approaching from the enemy's side unobserved, or without being stopped.

b. The post of examination.

The line of sentries is only to be passed where it is crossed by a road. A double sentry of the chain is posted here, and behind is the

Examining party

of four privates, who relieve the sentry and are under an intelligent non-commissioned officer. This latter examines and questions all who wish to pass the line of sentries either going or coming; and he passes or turns them back according to the orders he may have received from the officer of the piquet for carrying out the instructions of the commander of the outposts.

c. The detached post under a non-commissioned officer.

Peculiar circumstances, such as features of ground, &c., may oblige the officer of the piquet to occupy a point in front of the line of sentries. This is effected by a non-commissioned officer's party, posted either as a small piquet or as a so-called standing patrol. This means that the commander, while maintaining his position, makes himself safe by means of moveable or patrolling sentries.

d. The non-commissioned officer's post.

To ensure the distant sentries from attacks and annoyances by the enemy's patrols, and to give them confidence, a small non-commissioned officer's post, formed of

their reliefs, should be established at a convenient spot in rear, and strengthened if necessary by two or three patrollers.*

e. The supports to the piquets.

When the sentries are posted the officer decides on a position for his supports, which for infantry should be about 400, for cavalry 1,200 paces in rear of the centre of the advanced posts, and as much as possible under cover, and capable of defence. He places one man over the arms, divides his party into reliefs and patrols, and gives general instructions somewhat to the following effect:—

1. No compliments and no shouting; but on the slightest alarm quickly to arms (in the saddle).
2. No noise, but on the contrary, perfect silence.
3. No one is to absent himself without permission.
4. As to whether a fire may be lighted, and if so, when.
5. Whether smoking is allowed.
6. The men to rest in turn during the day by reliefs, and the horses to be watered and fed in the same manner.
7. All to be alert at night.
8. The knapsack must not be taken off at night (horses never unsaddled). The saddles may, however, be shifted.

The officer then allows the arms to be piled (cavalry to dismount), points out to the chain of sentries and the neighbouring piquets the position of their supports, withdraws the patrols sent out for security, and reports in

* In the event of rules *c* and *d* requiring a strengthening of the piquet; the officer must notify the same to the commander of the outposts.

writing to the commander of the outposts the position he has taken up, illustrated, if possible, with a pencil sketch.

Duty of the officer while on piquet.

The officer reports himself to any superior officer who may appear at the outposts. His first duty is to procure news of the enemy, and this he should do by means of patrols. He will immediately report anything of importance to the commander of outposts, if possible in writing, and giving the time to a minute. He will also, in case of approaching danger, at once warn the neighbouring piquets and reserves concerned. He is responsible for all who pass the chain of sentries either going or coming, and the duties of the examining party are under his personal surveillance, according to the instructions he has received from the commander of the outposts.

At night he always remains with his support.* He must not by day rest satisfied with merely going over the ground occupied by his piquet. He must consider it his bounden duty, by personal observation, to make himself acquainted with the ground and its practicability in all directions, so as to be able to instruct the sentries and patrols according to locality, and make his dispositions for anything that may occur, especially at night. It is advisable for instance at night, to change the position of the support, to move it to a road, and so to place it that surprise is impossible (it must not, therefore, be located in a house or farm yard). Look-out men must be posted in places whence, from the nature of the ground, danger is to

* Piquets without mounted orderlies, well acquainted with the ground, afford but a half measure of security. Vigilance alone is insufficient, a gain of time as well is equally necessary.

be apprehended. These proceedings must be agreed upon and arranged by day; it would be impossible to do so in the dark, and only lead to disorder.

The officer of the piquet should bear in mind that a well-ordered system of patrols contributes more to his security than the chain of sentries, and he must be careful that the patrollers, who ought as far as possible to be the same men for the same ground, do not during the day fail to make themselves well acquainted with the locality.

A patrol must be held always ready for urgent requirements close to the support. Immediately a shot is heard from the chain of sentries, it must hasten up to ascertain and report what is going on.

In case of an attack by the enemy, the officer must act promptly and with decision.

The general rule is to gain time for the troops encamped in rear; this is affected by the greatest possible resistance, supported by the reserve and the main body of the outposts. The officer of the piquet will do well at night to keep his forces together, fire to give the alarm, and use the bayonet for defence. A musketry fire in the dark is without effect.

Duty of the Sentries.

The chain is formed of double sentries (videttes), numbered from right to left, in the same manner as the piquets. They do not take off their knapsacks. They pay no compliments, nor do they allow their vigilance to be in any way disturbed by the presence of superiors. To these latter they make no reports, but merely reply to questions put to them.

Inasmuch as it is necessary that the chain of outposts be concealed as much as possible from the view of the enemy, so also must no avoidable movement or noise be

allowed. No one may remain there, except the immediate commanders and those belonging to their escort. No one, without exception, is to be allowed to pass the line of sentries, either going or coming, except at the roads that cross it. Anyone attempting to do so, whether by day or by night, is to be at once "halted," and warned off to the nearest road. The double sentry posted there also calls a halt and orders up the examining party who act as previously laid down.

Whoever does not halt at the command, or otherwise disobeys the orders of the sentry, must be fired upon.

Reliefs and visiting patrols in going along the line of sentries, will move inside the line, that they may not be perceived from outside. They will be recognised by the sentries during the day, and need not be challenged; at night one man will approach the sentry, and announce his presence by a noiseless signal. The sentry will halt him in a low tone of voice, and demand the parole and countersign in the usual form.

The relief and correct giving over of orders will then be carried out under the non-commissioned officer. The remainder of the relief awaiting in silence behind the chain, the men who are being relieved.

In case of anything being observed by the sentries as regards the enemy, it is to be reported by one of them to the piquet. If danger is imminent, the sentry fires.

The sentry over the Arms (piquet sentry).

The sentry over the arms pays no compliments, nor does he turn out the piquet. His orders comprise duties partly of police and partly of security, and vary according to the time of day, locality, and other circumstances; they can therefore only be given to him on the spot by the commander of the piquet.

Patrols.

1. *Reconnoitring Patrols.*

Reconnoitring patrols of two or three men, are sent outside the chain of sentries towards the enemy, to procure information, and to reconnoitre the ground in front.

They afford greater security to the piquet, supposing always that their march, as regards time and place, is well ordered, and that the men told off for this important service have been very carefully selected.

The indispensable qualifications are—the talent of finding one's way quickly on strange ground, perseverance and an aptitude for this particular service, and that presence of mind and shrewdness which enables one to decide what to do in the moment of danger.

The patrols receive their instructions from the commander of the piquet each time they go out, and report to him immediately on their return.

They must proceed slowly, cautiously, without noise, and halt frequently to listen. They should reconnoitre the ground as much as possible, so as to be able to report upon it, and if necessary, act as guides. They will avoid all engagements, and be on their guard against being cut off or taken prisoners.

The hour of their return should in general be named. They must only exceptionally and by special order venture more than a quarter of a mile (German) beyond the chain of sentries.

2. *Visiting Patrols.*

Visiting patrols of two men move from time to time along the line of sentries up to the neighbouring piquet to ascertain what is going on and to ensure that all are in

their places. The best time to send them is between reliefs, because the sentries have then been reported on.

3. *Strong Patrols.*

The object of strong patrols is to ward off the enemy's reconnoitring patrols or to dislodge his posts, and ascertain in a measure what is behind. They may therefore, if stratagem fails, act on the offensive. They will proceed, nevertheless, with the same precautions as the reconnoitring patrols, so as to surprise, if possible, and not be themselves surprised or become the prey to an ambuscade. In case the piquet is not strong enough to furnish men for such undertakings, they must be taken from the reserve. They receive their special instructions from the officer of the piquet concerned, he being best acquainted with what is going on, and report to him on their return.

Relief of the Piquet.

The relief moves off just before daybreak, in silence and with caution. It marches up on to the flank of the old piquet, and the commanders of the two carry out together the relief of the chain of sentries. The position is then taken up for day duty, and the commander of the new piquet acquires all the information necessary to him. Patrols of the old piquet, joined to those of the new one, advance meanwhile in the direction of the enemy, in order that these new patrols may be early introduced to the ground in front, and also that they may act as a protection to the sentries while they are effecting the relief.

It is advisable to notify to the piquet beforehand the hour of their relief, the name of the relieving officer, and to specify the troops who are to replace them.

Sect. 6.

Reserve to the Piquets.

The reserves are intended to support and re-inforce the piquets. They must accordingly not be too distant, and should be placed, when possible, at cross roads and under cover. It depends on the features of the ground and other circumstances whether the reserves mount at night only or by day as well.

The commanders place one sentry over the arms and secure themselves by means of look-out sentries at suitable places, according to time and locality. They maintain constant communication with the main body of the outposts and with the piquets in front by means of patrols. They concert measures of support with the officers of the piquets concerned, that they may be prepared in the event of their being attacked. What has already been laid down regarding the duty of the officer commanding the piquet, the instructions to his supports, the procuring and reporting of information and the early reconnaissance of the ground, applies also to the officer of the reserve.

Sect. 7.

The main body of the Outposts

Is under the special orders of the commander of the outposts, and should be so placed that it can be deployed in any direction according to the different arms of which it is composed. The measures for its security are a quarter and rear guard, who give the necessary look-out sentries.

The infantry pile arms, lay their knapsacks beside their arms, and keep on their accoutrements.

The cavalry do not unsaddle, nor the artillery unharness.

All cooking, feeding and watering, must be done by day.

In the event of a piquet giving the alarm the reserve stand to their arms (cavalry to their horses), and should a serious attack be made they must oppose the enemy or fall on his flank.

It is a valuable principle for the several component parts of outposts, that the smaller body must sacrifice itself for the larger one.

X.—*Bivouacs.*

The troops bivouac when it is necessary to have them together and in hand; for instance, in the vicinity of the enemy, when an action is desired, or when an engagement is likely to take place at any moment.

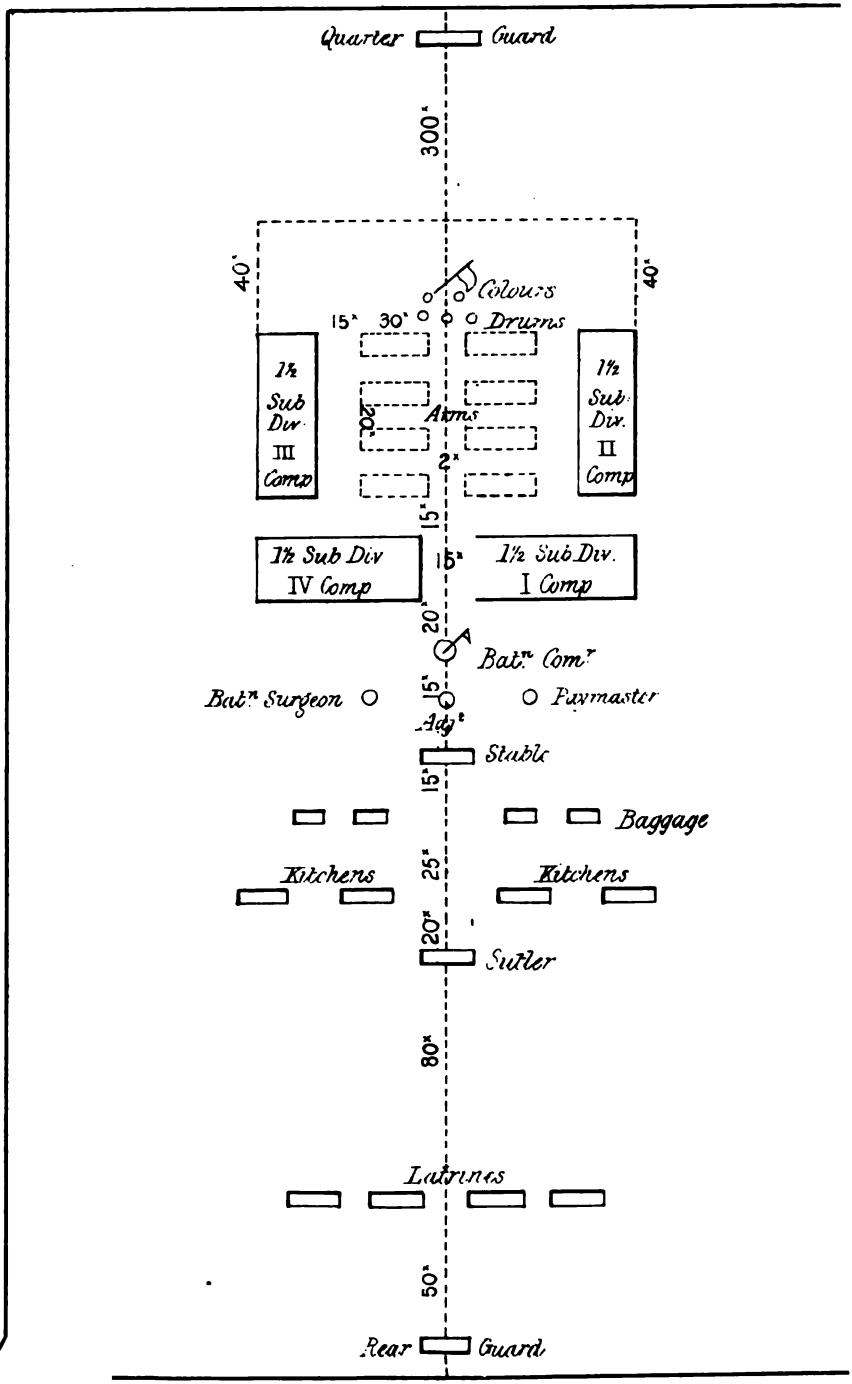
The bivouac should never be on the ground on which it has been decided to give battle, but in rear and near enough to be able to occupy it quickly and before the enemy can do so.

The communications between the bivouac and this position should be practicable and efficient, or they must be made so. They are also necessary in rear of the bivouac as a precaution in the event of a retreat.

The troops should bivouac as far as practicable in order of battle, so that they may the more easily get into their places if surprised or if obliged to break up their camp during the night.

It is necessary besides, in making choice of ground for the bivouac, to bear in mind the health and convenience of the troops. The matters for consideration on this point are protection from the wind, freedom from damp, good water, that the watering places are suitable and convenient and that the roads and villages are not too distant.

INFANTRY BIVOUAC.



Order of encamping.

A.—*Infantry. Entry into bivouac.*

Infantry bivouac always in double column on the centre.

So soon as battalions approach the ground on which they are to bivouac they march at attention, and form columns on the positions they are to occupy.

When this is done commanders of battalions give the word: "Quarter and rear-guards to the front!" and immediately afterwards, "Battalion! Order arms! Stand at ease!" On the first order the men for guard shoulder and move by companies thirty paces to the front; the rear-guard in rear of the quarter-guard, each guard standing in two ranks. The battalion adjutant then gives the word to the guards: "Inwards face!" "March!" and when they are opposite the centre of the battalion: "Halt!" "Front!" When the guards are formed, the officer of the quarter-guard gives the word: "Rear-guard! "Right about face!" and then to the two guards: "March!"

As soon as the guards are marched off, the sub-divisions open out to two-thirds distance to the rear, and the battalion commander orders "Pile arms!"

The pouch-belts and side arms are then hung on the arms, and the battalion commander orders "Battalion, outwards face!" whereupon the companies take up the positions shown on the annexed plan, lay down their knapsacks, and then move back to their arms, where the orders are given out.

As soon as the arms are piled, the colours and drums are placed in front of their centre. The officers bivouac on the spots where they stood in column.

When several battalions bivouac near one another, the

interval between their camps should be twelve paces, and between regiments twenty-four paces.

In case of bivouacing in lines, which should only take place when it can be done without inconvenience to the troops, the distance between them will be regulated according to the ground.

On a plain, the distance from the cooking places of the first line to the pile of arms of the second should be 150 paces.

Each regiment will detail one field officer, one captain, and one subaltern for the duty of the day.

Duties of Bivouac.

I. *Strength of the quarter and rear-guard.*

The strength of each battalion quarter-guard is—

1 officer,
2 sergeants,
1 drummer or bugler, and
24 privates.

They furnish—

1 double sentry on the right flank,
1 „ „ left „

each in a line with the quarter-guard;

1 sentry over the arms,
1 „ colours,
1 „ commanding officer.

There are, besides—

2 corporals and
1 orderly man.

The strength of the battalion rear guard is—

1 sergeant,
1 drummer or bugler,
21 privates.

They furnish—

1 double sentry on the right flank,
1 „ „ left „

each in a line with the guard;

1 sentry over the arms,
1 „ battalion wagons.

There are besides, two corporals for posting and visiting the sentries, and one orderly man.

The number of quarter and rear-guards and their composition are regulated according to the position of the bivouac, the number of battalions and of lines.

2. *Posting and giving orders to the sentries.*

So soon as the officer of the quarter-guard arrives at his post, he halts and tells off his guard. The first relief then advances, and the sergeant posts the sentries according to the instructions received from the officer. The guard remain under arms until all the sentries have been posted; the men then pile arms and take off their knapsacks. The sentries take their knapsacks with them, and lay them down behind them. The officer then reports to the field officer of the day that his guard is mounted and sentries posted.

The following are the orders given to the sentries:—

They are to pay the usual compliments to officers between *réveille* and retreat-beating; but after retreat they do so only to patrols and visiting rounds. These are challenged as is customary when in garrison, except that only one man is sent forward to give the countersign.

Officers may all pass the chain of sentries by day; at night they and every one else who approaches it will be challenged with the "Halt, who goes there?" and directed to the guard; the officer on duty and the commanding officer excepted.

Any soldier wishing to go outside the bivouac will be referred to the quarter-guard; but those who desire to enter, as also all strangers, such as market people, &c., will be halted and conducted to the guard by a man of the double sentries.

The sentries will pay attention to what goes on at the outposts, and immediately announce to the guard any unusual movement.

The guard fall in during the relief and remain under arms until the return of the sentries. The sentries of the rear-guard are posted in the same manner, and receive the same instructions. The sentries are all posted with their backs to the bivouac. The sentry over the baggage-wagons must keep a strict watch, and not allow any unauthorised person to approach them.

3. *Duty of the quarter and rear-guards.*

The guards pay the same compliments during the day as they do in garrison.

The officer takes care that the sentries perform their duties strictly. He sends to the field-officer of the day all arrested and suspected persons, and reports to him anything of importance. He gives careful attention to all that goes on at the outposts.

The parole, the sign, and the countersign, are sent to him by the battalion-adjutant, and he communicates the two latter to the sentries shortly before retreat-sounding.

During retreat-sounding (in which the drummers of the guard do not take part) the guards fall in under arms, and when it is over the men say their prayers. The officer afterwards makes his report. After retreat, and until *réveille* the guards pay no compliments except to visiting rounds, and to the field-officer of the day. These rounds

are halted by the sentry over their arms, examined by a sergeant and two men, and then allowed to move up to the guard, where they give the parole.

Patrols are halted by the sentry over the arms, examined by a sergeant and two men, without getting the guard under arms.

To ensure the vigilance of the sentries, patrols of a corporal and one or two men are sent out during the night, at intervals between reliefs (at the discretion of the officer), along the chain of sentries up to the neighbouring guards; patrols are also sent out in particular cases—such as repeated gun-shots at the out-posts, unusual stir in the direction of the enemy—and the officer reports the information received to the field-officer of the day.

The officer carefully examines all persons handed over to the guard by the sentries. Any suspicious looking persons are sent to the rear-guard, and the field-officer of the day is informed accordingly.

Whenever the sentries report the arrival of troops from outside, the guard stand to their arms, and a sergeant and two men are sent out to examine them.

When it has been ascertained who they are, their commander, or the whole party (if below ten in number), are to be conducted to the guard, where the officer himself examines them; and if they belong to the bivouac, he will allow them to pass. If they do not belong to the bivouac, they must proceed outside the line of sentries to their own camp.

Only one half of the guard are to be asleep during the night at the same time.

At an hour towards day-break, ordered by the commander-in-chief, the *réveille* is sounded from the guard, and prayers are then said.

In case of alarm, which can only be caused by a party of the enemy creeping in through the outposts towards the bivouac, the officer of the guard will march against him, that his resistance may give the requisite time for those in bivouac to get under arms.

The duty of the rear-guard is the same as that of the quarter-guard. Their particular business is the custody of those who are arrested, and to report on them to the field-officer of the day.

Two sergeants mount with each rear-guard to be at the disposal of the field-officer of the day, for such duties as will be named hereafter.

4. *Retreat and Réveille-sounding.*

Retreat-sounding will be at such an hour in the evening as may be determined by the commander-in-chief. The "Appel" (roll-call) will then be held by companies, the evening prayer said, the arms inspected, and the reserves for the piquets will leave the bivouac. At day-break the drums of the guard will beat the *réveille*, and the men rise and brush their clothes. An hour later there will be company's "Appel" and morning prayers.

The piquet reserves return to bivouac on receiving the order to do so.

5. *Duty of the field-officer of the day and of the officers for "visiting rounds."*

The field-officer of the day comes on duty when the guards mount, and reports himself to the colonel of the regiment. He has charge of the guard and of the police of the whole bivouac of the regiment. He has the regimental captain and subaltern of the day detailed for visiting rounds to assist him. They mount at the same

time he does, report themselves to him, and receive his detailed instructions for the performance of their duties. The field-officer inspects the guards by day and by night, and causes the subordinate officers to do the same.

He receives the guard, reports and brings anything of importance to the notice of the colonel of the regiment.

In case of alarm, he repairs to the line of quarter-guards, and endeavours to check the advancing enemy until the troops in bivouac are under arms or are approaching.

For the performance of the police duties he employs the two sergeants told off by each battalion and attached to the rear-guards. They are to take care that no fire breaks out and to see that there is no cooking except at the appointed kitchens. They must not permit any soldiers to loiter about the sutler's camp after retreat-sounding, nor to create noise or disorder.

6. *Assembly of the troops in front of the bivouac.*

This parade takes place only by special order; the troops then turn out with their clothing in order, in forage caps and without arms. The officers stand in one rank in front of the centre of battalion, and the drummers behind them.

7. *Proceeding in case of alarm.*

On occasions of alarm by day or by night, each soldier will immediately seize his arms and accoutrements and hasten to the *place d'armes*. The guards remain standing until specially ordered to move. The horses are at once put to the wagons.

8. *Break-up of the bivouac.*

When the bivouac is to be broken up the "general

march," is to be sounded one hour beforehand. The men then put on their knapsacks and prepare to march off.

The "*assembly*" will sound a quarter of an hour before the time fixed for departure. The men then take their arms and fall in on the quarter-guard parade, and the quarter and rear-guards come in. After the "general march" has sounded, the fires are to be carefully put out by means of water or earth.

B.—*Cavalry. Entry into Bivouac.*

Cavalry always bivouac in column. The regiment is formed in column of squadrons at half distance on the right of the place of bivouac. On the order being given, "Standard and rear-guards to the front! march!" the men for guard form on the right of their respective squadrons, and then move at a gallop twenty paces in front of the centre of the first squadron, the standard-guard forming the first rank, the rear-guard the second.

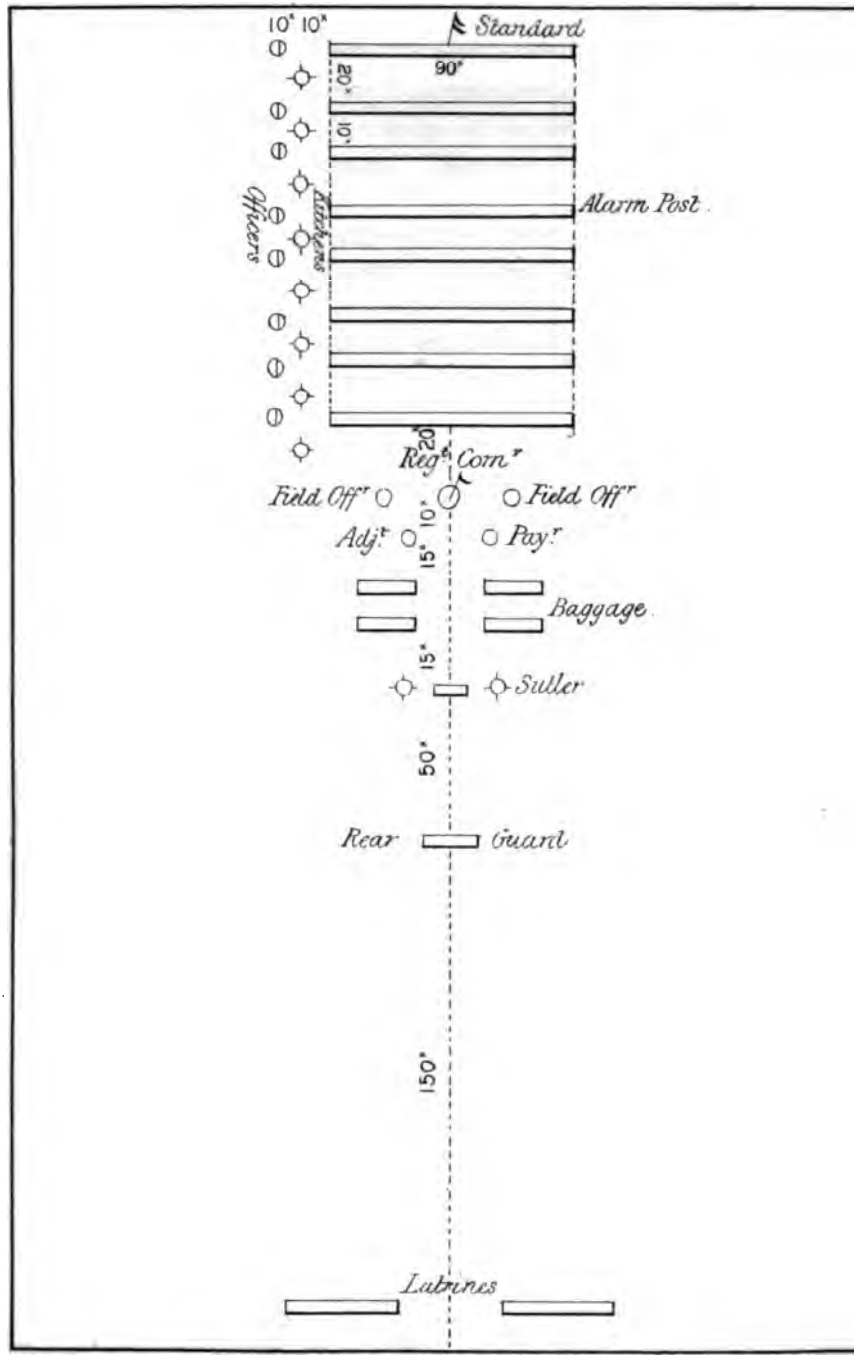
The officer of the standard-guard and the standard-bearer accompany them; the first places himself in front of the guard, the latter on the right of it. The trumpeters are marched up to guard mounting by the adjutant of the regiment and placed ten paces in front of the guards, facing the regiment.

"Regiment, return swords." The guards retain their swords in hand.

"Regiment, divisions left wheel." "March." "Forward!" The divisions move to the distance of a squadron and one quarter. The guards following the movement by the "left" and "right turn."

When the last division has moved squadron distance to the left: "Regiment," "divisions right wheel!" "Forward!" "Halt."

CAVALRY BIVOUAC.



The guards and trumpeters at the same time front, "Rear rank;" "About;" "March!" "Forward!"

Trumpets sound the "Take post." The officers of the first and fourth divisions pass round by the flanks, and place themselves in front of the rear rank.

The rear guard move to their place by the right of the regiment; swords are returned to the scabbards; a sentry is placed over the arms, and the remainder of the men join their squadrons.

When within 10 paces of the front rank of the following squadron, "Rear ranks!" "Halt!" The ranks divide the intervals and prepare to dismount without orders, and without moving out the first men for duty.

"Dismount!"

The men take off their helmets, pouch-belts and swords (cuirassiers the cuirass). The swords are thrust into the ground three paces in front of the heads of the horses, hilts to the front; the helmet is placed on the sword, peak to the front and gloves inside, the pouch-belt hung over all, with the flap outwards. The cuirass is placed below the sword, breast to the front. The lance is stuck into the ground half a pace to the right of the sword.

The piquet posts are driven in as much in line with one another as possible and at equal distances; the piquet ropes are then made fast.

The bits of the bridles are laid out near the arms, with the headstalls towards the horses.

On the order to unsaddle, saddles are placed three paces behind the horses, with the forks towards them; carbines remain on the saddles. The blankets are folded and placed on the saddles. The interval between regiments is 75 paces.

Duty in bivouac.

1. *Strength and duty of guards.*

The standard-guard is composed of—

1 officer;
1 sergeant;
1 trumpeter; and
11 privates.

These furnish; 1 sentry in front of each flank; 1 sentry over the standard; 1 man to post and visit the sentries; 1 orderly man.

The rear guard is composed of—

1 sergeant, and
11 privates.

These furnish 1 sentry on the right, facing outwards; 1 sentry on the left, facing outwards; 1 sentry over the arms; 1 man to post and visit the sentries; 1 orderly man.

The strength of the guards, especially of light cavalry, depends on the number of men detached. It is left to the discretion of the commander to reduce them to the number actually necessary for the security of the bivouac.

After the standard-guard is posted, swords are returned; the officer then orders the first man for sentry over the arms, the sergeant and the trumpeter to dismount; and the standard to be fixed in the ground, with the kettle drums two paces in front of it. He then moves off the guard to the left, at a walk, and the men, including the trumpeter, rejoin their squadrons. The sergeant of the rear-guard acts in a similar manner. A quarter of an hour after this the guards are to be assembled at their posts and the sentries posted forthwith.

Whenever the guard stand to their arms the sentry

places himself to the right, and close to the standard. The officer falls in on the right of the guard, with the trumpeter one pace on his right. As soon as it becomes dark the sentries on the flanks of the regiment challenge all who approach them with, "Halt! who goes there," and order those who do not belong to the regiment to the standard-guard.

Compliments will be paid as in garrison, and prayers said after retreat. The rear-guard will take care that no man loiters at the sutler's camp after retreat. During the night, patrols of a corporal and one or two privates are sent out by the guards, at intervals, along the chain up to the neighbouring guards; their particular object being to ensure the vigilance of the sentries. Anything of importance is to be reported to the captain of the day.

2. *Duty of the captain of the day.*

A regiment has a captain and each squadron an officer and two sergeants of the day.

The captain reports himself to the commander and receives his orders as to the hours of unsaddling, feeding, watering, &c. He reports to him also on everything connected with the duties in bivouac.

As soon as it begins to get dark he orders the streets between squadrons to be closed.

3. "*Retreat*" *and* "*Boot and Saddle*" *sounding.*

Retreat will be sounded in the evening, before dark, at the hour named by the commanding officer. The trumpeters assemble at the standard half-an-hour before and play as is usual, in the evening. The squadrons at the same time fall in for Appel (roll-call). After the retreat the trumpeters play a hymn, and the men say their prayers in a low voice.

The "Boot and Saddle" will generally be sounded by the trumpeter of the guard at day-break. When the bivouac is to break up early it will sound three hours before moving off. The men then rise at once and commence their stable duties.

4. *Assembly of the troops in front of the bivouac.*

The squadrons fall in in front of the bivouac only by particular order, and then in fatigue dress with forage caps and without side-arms,—the officers in front of the right of their squadrons. The trumpeters form a circle in front of the standard and play.

5. *Proceeding in case of an alarm.*

Each man saddles his horse as quickly as possible, dresses himself, takes his arms and accoutrements, and rides to the alarm-post.

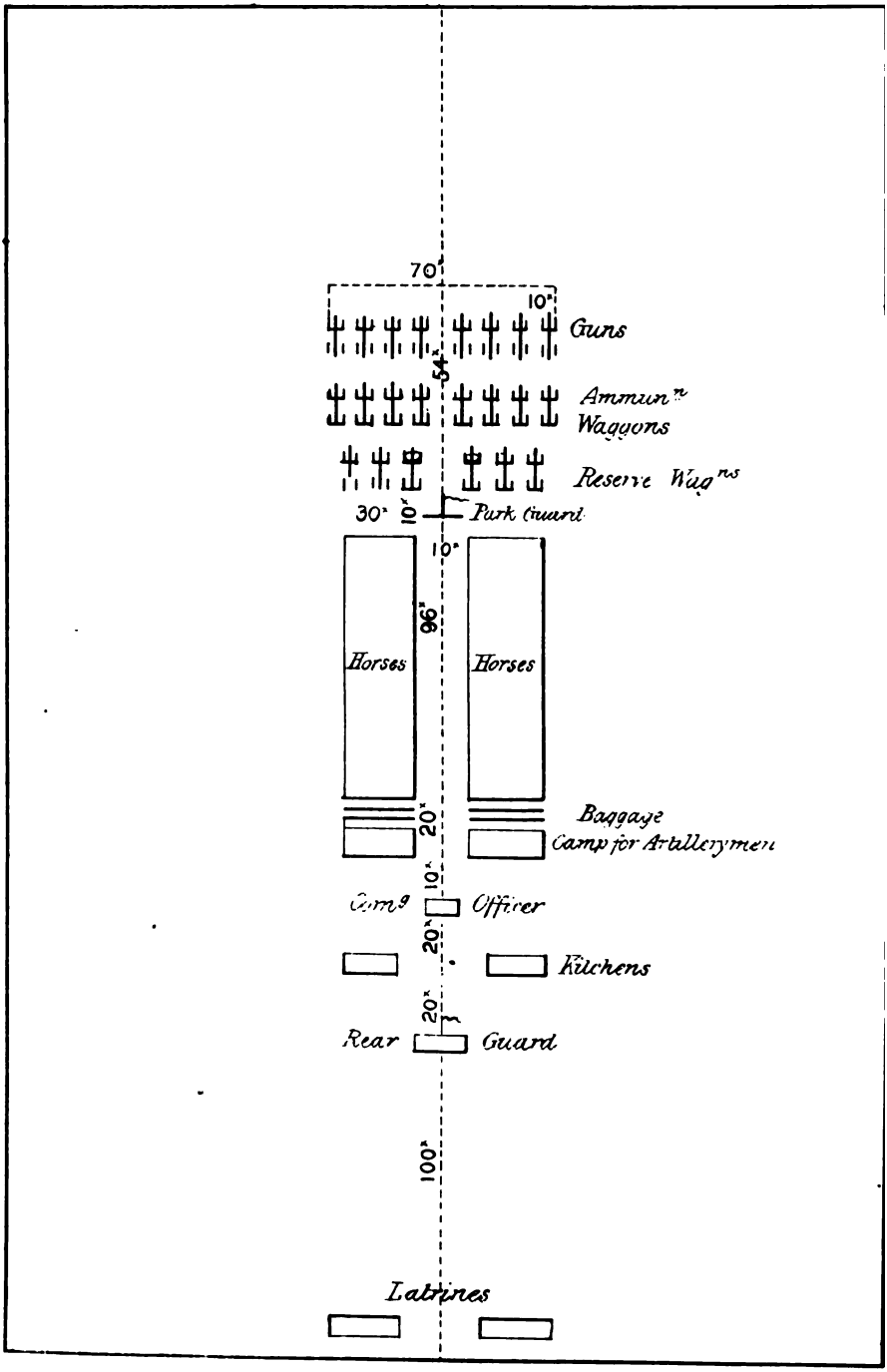
6. *Breaking up of the bivouac.*

The guards and sentries will be brought in half-an-hour before moving off. The standard-bearer repairs, mounted, to the standard, puts it into the bucket, and faces outwards. The junior officer of the regiment, who ought to come up at the same moment, halts in front of the standard. The officer of the guard and the sentry over the standard retire as soon as the standard-bearer has taken charge of it.

When the regiment is about to leave the bivouac, the order will be given "to horse," followed by the "mount." The officers remain in the places they were in, on going into bivouac, in front of the ranks.

The squadrons close towards the right of the front ranks.

ARTILLERY BIVOUAC.



"Front ranks! about! march! forward!"

When close to the rear ranks,—

"Regiment—front! halt!"

The officers of the first and fourth divisions move to their proper places.

"Regiment—divisions right wheel! march! forwards!"

And when arrived on the ground where it stood before going into bivouac,—

"Regiment — divisions left wheel! march! halt!"

"Regiment—draw swords! attention!"

The officer who has accompanied the regiment with the standard, takes it to its proper place.

C.— *Artillery. Entry into Bivouac.*

The guns and carriages are formed on the ground intended for the bivouac, as shown in the plan. The wagons having the heads of the leading horses four paces from the muzzles of the guns in front. In the horse artillery the detachments are formed in the intervals to the right, in line with their respective markers, and one pace from them.

"Park and rear-guards to the front, march."

The men for duty fall in (horse artillery mounted) ten paces in front of the centre of the battery; the park-guard in the front rank and the rear-guard in rear.

Afterwards, on the order to "dismount" and "unhook," the division commanders mark the front angles of each of the horse lines by driving picket-posts into the ground.

The drivers having in the meanwhile with the assistance of the detachments unhooked the horses advance one horse's length and re-mount. In the horse artillery the rear-rank of the detachments rein back one yard.

On the order "About! march! halt!" each rank, and

the men for guard in the horse artillery, wheel to the right about. In the field batteries they face about. The pairs of horses of all the teams which are on the right of the entrance to the lines turn to the left about, the others to the right about, and halt.

"*March!*"

Guards and gunners of field batteries march to their posts.

The teams and mounted detachments advance "by twos" from the centre, between half batteries, and move in the following order into the horse lines: commanders of divisions, teams of the third line, wheelers leading, teams of wagons and guns of the second and first lines.

The detachments of horse artillery place themselves, rear-rank leading in front of the teams of their respective guns.

So soon as the heads of the columns reach the rear of the lines, the command is given "right and left wheel, march! forward! halt!"

The non-commissioned officers and all drivers wheel towards the lines nearest them. The horse artillery detachments wheel by ranks, and open the intervals sufficiently to give the horses room.

The order is now given: "Dismount!" "Unharness!"

The men then take off their helmets, valises and arms. The picket-posts are driven in and the picket-ropes made fast. The swords of the mounted men are thrust into the ground six paces in rear of the saddle horses, with the edges from the horses. The helmets are placed on the swords with the eagle-plates facing the same way as the edges of the swords. The pouches of the horse artillerymen are placed over the helmet. The harness is placed

three paces in rear of the horses in the following order:— The saddles and pads* of the off horses with the pummels towards the horses, the blankets upon them ready folded for saddling, the bridle with the bit towards the horse. The collar harness of the drought horses is placed so as to rest on the fore-part or pad end of the saddle with the lower part towards the saddle. Breast harness is placed in the same manner.

Detachments of field artillery place their appointments in two lines. The knapsacks with the straps turned back over them and the canteen removed; the helmets on the knapsacks, eagle-plates in front.

Duty in Bivouac.

1. *Strength and duty of the Guards.*

The park and rear-guards of a battery of eight guns are of the strenght of a bombardier and six men each. They furnish two sentries each, and each sentry has charge either of the park or of the camp of half a battery.

The guards of a battery of four guns are generally only half as strong, and furnish only one sentry each. The two guards look to the safety of the guns and to the maintenance of order in the bivouac; they have also to see that no men leave it without permission. The park-guard must not allow any one to meddle with the guns, or to pass between the carriages without the presence of the subdivision commanders.

The particular duty of the rear-guard is to guard against fire, and in case of it breaking out, to give the alarm and help to put it out.

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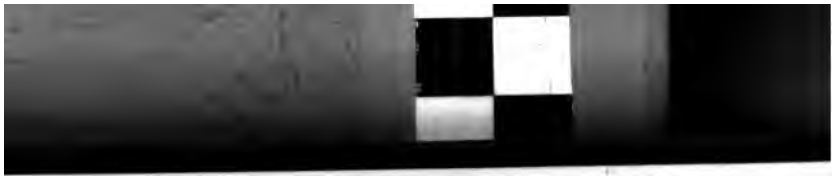
* The Prussian off horses now each carry a saddle, the same as the saddle horses.



The sentries must keep a look-out on all that goes on outside their own bivouac, and report immediately any unusual movement in the other bivouacs, or any signal or firing at the outposts.

Every one must be challenged at night, and unknown and suspicious-looking persons sent to the park-guard, although they may have given the parole and countersign.

Anything of importance is to be immediately reported to the officer of the day.

2. *Duty of the Officer of the day.*

An officer of the day is to be detailed by each battery with a bombardier to assist him; he carries out the orders of the commander of the battery as regards unsaddling, feeding, watering, &c.; on him devolve also the arrangements, general order and requirements of the bivouac, and the superintendence of the duties. He will report anything of importance to his commanding officer.

3. "*Retreat*" *and* "*Boot and Saddle*" *sounding.*

"Retreat" will sound at night-fall. Before "retreat" the men fall in, in front of the guns for the "Appel," and the orders are given out. They then say their prayers in a low voice and go to rest. "Boot and saddle" will sound at day-break, or two hours and a-half to three hours before the march. The men then rise, the detachments clean their appointments, and the remainder go to stables.

4. *Assembly in front of the Bivouac.*

The parade in front of the bivouac only takes place by special order, and then in fatigue dress, forage cap, and without side-arms. The men form on the "Appel" parade, the officers in front of the right.

5. *Proceeding in case of alarm.*

In the event of alarm the horses are moved out of the horse lines by teams at a trot; each team moving to its respective carriage by the shortest way. The detachments, after having assisted in saddling and harnessing, hasten to their guns to help to hook in. They then put on their accoutrements and stand to their guns.

6. *Breaking up from the Bivouac.*

On the "saddle" sounding all is to be made ready for marching off. The drivers and detachments mount without word of command, as soon as they have got their horses ready; they will then receive the order "Rein back!" "March!" (one horse's length) and on the order, "Right and left wheel! march! forward!" they move at a walk to their respective guns and carriages in reverse order to that in which they entered the horse lines; they then dismount on the order and hook in. The detachments of the field batteries put on their knapsacks and go straight to their respective guns. The drivers mount as soon as they have hooked in.

D.—*Jägers (Riflemen) and Marksmen.*

The Jägers and marksmen bivouac according to the instructions given in section A.

E.—*Pioneers.*

The pioneers bivouac according to the instructions given in section A (*see* page 63).

APPENDIX.

PROGRAMME.

A.—*Preparations.*

1. So soon as His Majesty's decision respecting the manœuvres of the troops for the current year is published, the commanding generals will submit to the War Minister their proposed arrangements in detail, including their selection of ground and the dates on which the exercises are to take place.

2. In the years that the autumn manœuvres of *corps d'armée* take place before the king, they will forward to the Minister of War, for the gracious approval of His Majesty, the general and special ideas for their united manœuvres, together with a plan of the order of battle and of the formation for parade, according to the forms given in Supplements I. and II.

The order of battle, which is the normal and original fighting formation of the *corps d'armée* (*see* Supplement IV.) (not to be confounded with the varying tactical formations), shows the composition of the brigades, divisions, &c., of the corps, conformable to the directions given in the instructions for the mobilisation of the army (chap I., sec. I.), it defines all that is necessary as to the distribution of command, concerning which the following principles are to be observed.

Vacancies in the command of divisions are to be filled by the senior brigade commanders; vacant brigades by the senior commanders of regiments in their respective

corps, according to the arm to which they belong: vacant line regiments by their own senior battalion commanders.

"Landwehr" regiments of infantry are to be commanded by the senior infantry field officers in the corps, and may be either posted, attached or appointed only to do duty.

In the cavalry the vacant command of a regiment is given, as a rule, to the senior field officer; when however, he happens to be in command of the corresponding "Landwehr" cavalry regiment, the line regiment will be commanded by the senior captain of the regiment, unless it be decided otherwise by the proper authorities.

These principles will be acted upon throughout, unless particular circumstances (which should be stated) render it necessary to deviate from them.

3. The commander-in-chief and generals of divisions will inform the chief of the staff of the army what maps are necessary for the purposes of the manœuvre, and such requirements will be supplied as far as possible from the stock in the map depôt.

When it is necessary to prepare special maps for carrying out the great autumn manœuvres before His Majesty, the chief of the staff of the army has instructions to charge the cost to the Minister of War, and to cause the maps required to be supplied at once.

4. Demands for field metallographic passes for copying orders, dispositions, &c., are to be made by the commander-in-chief on the Minister of War.

5. When several *corps d'armée* manœuvre together, the general idea on which the excercise is to be carried out, and special ideas relative thereto, are to be communicated the day before each manœuvre.

B.—*Course of the Exercises.*

6. The proposed dispositions of the commanding generals acting against one another must be forwarded to the commander-in-chief, when practicable, the day before each manœuvre, together with a sufficient number of copies for the umpires.

7. Whenever the king attends the autumn manœuvres of a *corps d'armée*, the commanding general will present His Majesty, on arrival, with a "state" of the corps for the day preceeding a manœuvre, with a "programme" of the proposed dispositions, and on the day before the review-order parade, with a plan showing the formation of the troops to be present. (Supplement III.)

The day before the parade a "marching-state" will be sent to the adjutant-general and to the aide-de-camp to His Majesty, giving the names of commanding officers, including those leading the several divisions (companies or half companies, squadrons or half squadrons), in the order in which they march past.

The report on each disposition will be headed with the special idea to which it refers, and contain the proposed tactical distribution of the troops concerned, according to the form given in Supplement IV.

When the same distribution is to be maintained in the manœuvres that follow, or when trifling alterations only are made, it will be only necessary to mention it in the report.

The instructions given in Supplement II. regarding the size and thickness of the paper apply to this report also. Taking into account, however, the smaller dimensions of the paper, the writing may extend over the whole sheet.

If the general officer commanding the corps has a

metallographic press at his disposal, he will cause a sufficient number of copies of the dispositions and accompaniments (Supplement IV.) and of "states" of the troops on parade to be struck off. At the commencement of the parade or manœuvre an officer will distribute a copy to each of the spectators in His Majesty's suite.

General officers commanding will, in the year when no great autumn manœuvres of their corps take place, forward to the Minister of War by the 15th September a short and concise report (according to Supplement V.) on the manner in which the autumn manœuvres have been conducted, and on the efficiency, &c., of the officers and troops.

Special reports on particular manœuvres, performed in the presence of commanding generals, are to be added at the discretion of the commander-in-chief.

They will contain—

1. The idea that originated the manœuvre.
2. The dispositions of the commanders on both sides.
3. A short and concise description of such dispositions.
4. The necessary sketch for the comprehension of the manœuvre.

The general commanding the corps must express his opinion as to the dispositions made by the commanding generals, and as to their manner of executing them, and his remarks are, as far as possible, to be given opposite those parts of the report to which they refer.

9. In the years of the great autumn manœuvres before His Majesty, the generals in command will send to the chief of the staff of the army, as soon as possible, the report prescribed in section 8 and Supplement V., together with the special reports of the commanders of the opposed

forces, which latter should include the special reports of commanders of detachments (advanced guards, reserves, &c.)

(Form.) SUPPLEMENT I.

ORDER OF BATTLE

OF THE 4 CORPS D'ARMEE DURING THE GREAT AUTUMN MANŒUVRES IN THE YEAR 18 .

General Commanding . . .	Lieut.-General
Chief of the Staff . . .	Lieut.-Colonel
Commander of Artillery . .	,,
Infantry Division . . .	Lieut.-General
Infantry Brigade . . .	Major-General
Regiment of Guards (attached) .	Lieut -Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	,,
Fusilier Battalion . .	,,
Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	,,
Fusilier Battalion . .	,,
Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	,,
Fusilier Battalion . .	,,
Infantry Regiment . . .	Major-General
Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	,,
Fusilier Battalion . .	,,
Infantry Division . . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	,,

Fusilier Battalion . .	Major
Jäger Battalion . . .	Captain
Dragoon Regiment . . .	Major
Battery of the [d] Brigade of Artillery	„
Infantry Division . . .	Lieut.-General
Infantry Brigade . . .	Colonel
Infantry Regiment . . .	„
1*st Battalion* . . .	Major
2*nd Battalion* . . .	„
Fusilier Battalion . .	Captain
Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	„
Fusilier Battalion . .	„
Infantry Brigade . . .	Major-General
Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	„
2*nd Battalion* . . .	Major
Fusilier Battalion . .	Captain
Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	„
Fusilier Battalion . .	„
Battery of the [d] Brigade of Artillery	„
Cavalry Division . . .	Major-General
Light Cavalry Brigade . .	Colonel
Dragoon Regiment . . .	Captain
Hussar „ . . .	„
Heavy Cavalry Brigade . .	Major-General
Cuirassier Regiment . . .	Lieut.-Colonel
Ulan Regiment	„

Horse Battery of the ... Brigade Artillery	Major
Artillery Reserve ... Brigade of Artillery	„
Field Battery	„
Horse Artillery Battery	„

OBSERVATION.

When the Regiment of Fusiliers takes part in a manœuvre it will be attached to one of the divisions.

(Form.) SUPPLEMENT II.

PARADE STATE

OF THE TROOPS AND THEIR COMMANDERS OF THE CORPS D'ARMEE ON THE 18 .

General Commanding	Lieut.-General
Chief of the Staff	Lieut.-Colonel
1st Line.	
Infantry Division	Lieut.-General
Infantry Brigade	Major-General
Guards Regiment (attached)	Lieut.-Colonel
1st Battalion	Major
2nd Battalion	„
Fusilier Battalion	„
Infantry Regiment	Lieut.-Colonel
1st Battalion	Major
2nd Battalion	„
Fusilier Battalion	„
Infantry Regiment	Lieut.-Colonel
1st Battalion	Major
2nd Battalion	„
Fusilier Battalion	„

Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	„
Fusilier Battalion . .	„
Infantry Brigade . . .	Major-General
Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	„
Fusilier Battalion . .	„
Infantry Division . . .	Lieut.-General
Infantry Brigade . . .	Colonel
Infantry Regiment . . .	„
1*st Battalion* . . .	Major
2*nd Battalion* . . .	„
Fusilier Battalion . .	Captain
Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	„
Fusilier Battalion . .	„
Infantry Brigade . . .	Major-General
Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	„
2*nd Battalion* . . .	Major
Fusilier Battalion . .	Captain
Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	„
Fusilier Battalion . .	„
Fusilier Regiment . . .	Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	„
3*rd Battalion* . . .	„
Jäger Battalion (*attached*) . .	Captain

Pioneer Battalion (attached) .	Captain

2nd Line.

Cavalry Division . . .	Major-General
Light Cavalry Brigade . .	Colonel
Dragoon Regiment . . .	Captain
„ „ . . .	Major
Hussar Regiment . . .	„
Heavy Cavalry Regiment . .	Major-General
Cuirassier Regiment . . .	Lieut.-Colonel
Regiment of	Major
„ „	„
Artillery Brigade . . .	Lieut.-Colonel
1*st Field Battery* . .	Major
2*nd Field Battery* . .	„
3*rd Field Battery* . .	„
Horse Artillery Battery . .	„
Train	„

EXPLANATIONS.

1. Commanding officers, including general officers, commanders of battalions and of batteries, will be styled according to their name and appointment; but when they are only temporarily in command their actual rank will be given.

2. When the "Landwehr" takes part at the parade the head-quarters of the battalions and the unembodied squadrons will be given.

3. The size of the paper to be employed is the quarto or large octavo, and the programmes must be written or metallographed on strong cardboard that they may be used on horseback.

The above form will be a guide for writing and abbreviations. Proper names, and those of bodies of troops from brigades upwards, to be given in Roman characters.

(Form.) SUPPLEMENT IV.

DISTRIBUTION OF THE TROOPS

OF THE ^{d}CORPS D'ARMEE AT THE MANŒUVRE AGAINST THE ^{d}CORPS D'ARMEE, THE OF 18 .

General Commanding . .	Lieut.-General
Chief of the Staff . . .	Lieut.-Colonel
Commander of Artillery . .	,,
Advanced Guard . . .	Major-General
Infantry Brigade . . .	,,
Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	Captain
Fusilier Battalion . .	,,
Infantry Regiment . . .	Major
1*st Battalion* . . .	,,
2*nd Battalion* . . .	,,
Fusilier Battalion . .	,,
Jäger Battalion . . .	,,
Battery Rifled-Artillery Brigade	Captain
Howitzer Battery ,, .	,,
Pontoon Train of Advanced Guard	,,
Cavalry :—	
Hussar Regiment . .	Major
Half-Horse Battery . .	Captain
Main Body . . .	Lieut.-General

Infantry Division . . .	Major-General
Fusilier Battalion . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	„
3*rd Battalion* . . .	Captain
Infantry Brigade . . .	Colonel
Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	Captain
Fusilier Battalion . .	„
Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	„
Fusilier Battalion . .	Captain
Infantry Brigade . . .	Major-General
Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	Captain
Fusilier Battalion . .	„
Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	„
Fusilier Battalion . .	„
Rifled Battery	Captain
Howitzer Battery . . .	„
12-*pounder Battery* . . .	„
Dragoon Regiment . . .	Major
Reserve	Lieut.-General
Infantry Brigade . . .	Colonel
Infantry Regiment . . .	„
1*st Battalion* . . .	Major
2*nd Battalion* . . .	„
Fusilier Battalion . .	Captain

Infantry Regiment . . .	Lieut.-Colonel
1*st Battalion* . . .	Major
2*nd Battalion* . . .	Captain
Fusilier Battalion . .	Major
12-*pounder Battery* . . .	Captain
Cavalry Reserve . . .	Major-General
Cavalry Brigade . . .	Colonel
Dragoon Regiment . . .	Lieut.-Colonel
Ulan Regiment	Major
Cavalry Brigade . . .	Colonel
Cuirassier Regiment . . .	Lieut.-Colonel
Ulan Regiment	Major
Horse Battery	Captain
Artillery Reserve . . .	Major
Rifled Field Battery . . .	Captain
Howitzer „	„
12-*pounder* „	„
Horse „	„
Half-Horse „	„
Pioneer „	„
Pontoon Train	„

NOTE.

1. The directions given in the explanations to Supplement II. are to be conformed to here, with this exception, that the name of the head-quarters of the "Landwehr" Battalion, and not that of the embodied squadrons, is to be omitted.

2. The original and normal formation is to be departed from as little as possible in the tactical subdivision of the troops.

SUPPLEMENT V.

REPORT OF THE AUTUMN MANŒUVRES

OF THE DIVISIONS OF THE [d] CORPS D'ARMEE IN THE YEAR 18 .

THE DIVISION.

If the manœuvres have taken place exactly according to the appointed dates.

1. Distribution of the exercises as regards time.

Whether any deviations have taken place, and if so, what they are; also under what circumstances these deviations have been brought about?

2. Strength of the troops taking part in the manœuvres.

The strength is only to be given at the conclusion of the exercises, and made out on a "State." Important deviations from the established strength are to be explained.

3. Condition of the troops.

4. Disposition and direction of the manœuvres.

5. Provisions and supplies.

6. Health.

Here give the sick list from the commencement of the regimental exercises until the conclusion of the manœuvres.

7. Particular observations.

ee.

Supplement III.

Brigade 1. *Infantry Brigade.*

Major General.

3. 2. *E.P^r Gren^r Reg^t* N°3. 5. *E.P^r Inf^y Reg^t* N°41. 1. *E.P^r Gren^r Reg^t* N°1.

Colonel *Colonel.* *Colonel.*

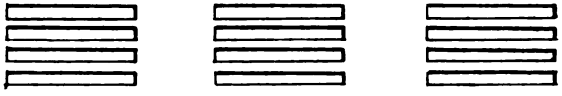
F *Maj^r* II *Maj^r* I *Maj^r* F *Maj^r* II *Maj^r* I *Maj^r* F *Maj^r* II. *Maj^r* I. *Maj^r*

1 *Cavalry Brigade.*

Major General.

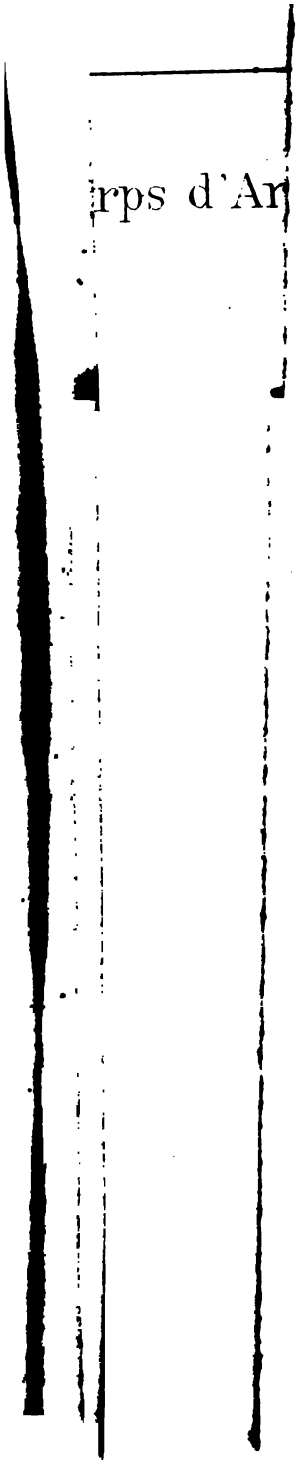
°1. *Lith U Reg^t* N°12 *Lith D^r Reg^t* N°1 *E.P^r Hus^r Reg^t* N°3

Colonel. *Colonel* *Colonel.*



^es & Batt^rs are to be given
their Brigade N^o from the right, and the Reg^ts in the same manner.
rule, but should this be deported from, i.e if the right Brigade is placed on
wing.
Div^l Commanders. In the event of the two Com^rs belonging to the same arm
ich is composed of Troops not of his own arm

(Date)



Explanations with reference to plan M.

1. The object of the manœuvres against an enemy represented by small detachments (skeleton enemy), is to practise the commanders in understanding and accomplishing a given task according to the different arms of the enemy opposed to them and the features of the ground. Such manœuvres should be so managed that the several divisions of troops manœuvring may all be employed as often as possible. With this view some of the divisions may be allowed a degree of latitude as regards strict conformity to the principles of tactics.

2. The chief in command commands himself. He divides the manœuvre into a number of movements, and arranges carefully beforehand the positions and movements of the skeleton enemy. The movements are to be separated by pauses when this can be done without prejudice to the intended representation of what would occur in war.

3. The skeleton enemy never manœuvres independently. He should only be the motive for the measures of the manœuvring troops.

4. Commanding officers and troops are made acquainted with the general idea and rendezvous only—all the rest is ordered as the manœuvre proceeds.

Example of the Manœuvre of a Division against a Skeleton Enemy.

(*Vide* Plan.)

General Idea.

A beaten army withdraws itself across the river Rabach. A rear-guard covers the retreat. A division of the hostile army falls in with the rear-guard near Neüdorf and attacks it.

(For the rendezvous of the division, *vide* Plan.)

Instructions for the Skeleton Enemy.

It represents the rear-guard of the beaten enemy, and will take up eight different positions in the following manner:—

(The several positions of the Skeleton Enemy are shown thus:—————)

1st Move. Deployment of the cavalry and of a battery near Neüdorf Mill.

2nd Move. Assembly of the whole of the rear-guard in position with Neüdorf in front.

3rd Move. Advance of the infantry against the right of the enemy's advanced guard and against the head of the column of march of his main body.

(This movement will be ordered by the commander of the division.)

4th Move. Deployment of the cavalry to cover the retreat on the plateau to the north of Neüdorf.

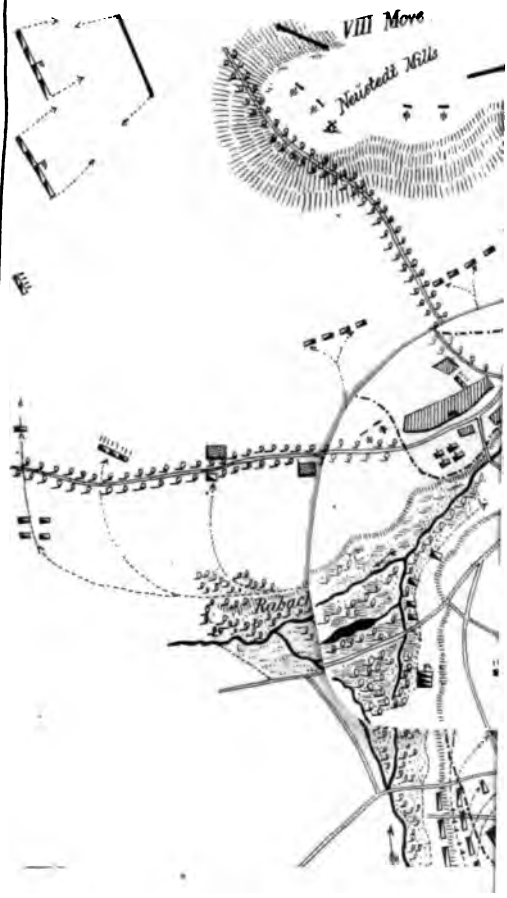
5th Move. Occupation of Neüstedt with infantry and two batteries.

6th Move. The infantry take up a position in the wood of Neüstedt and two batteries at Neüstedt Mills.

7th Move. Offensive movement against the enemy advancing in the wood of Neüstedt.

(This movement will be ordered by the commander of the division.)

8th Move. The whole of the rear-guard takes up a position near Neüstedt Mills.

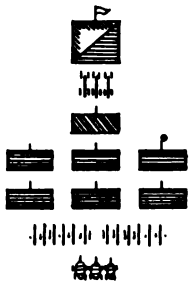


Hon.r Kat.
Pontoon Tr

RENDEZVOUS FORMATION.

of a Corps d'Armee on the War Establishment.

Advanced Guard.



1 Lt Cavalry Regt of the Xth div.n Hus.rs

½ Bal. H.A reserve

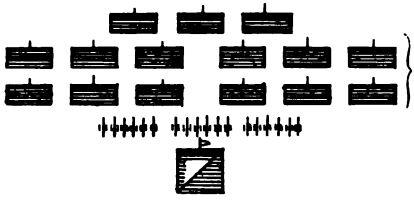
Jager Batt.n

1 Inf.y B.de X Div.

1 Rifle Bat.n & 1 How.r Bat.n Div.

Advanc.d Pont.n Train

Main Body



Fus.r Regt.

Div.n

Drag.ns

Reserve

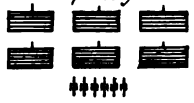
Cavalry

1 Lt Drag.r 3 Heavy

(3 Ul.ns 1 Cur.r Regt.

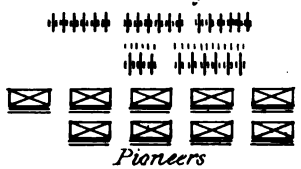
1 H.A Batt.y

Infantry



1 B.de of the Xth Div.n and 1 12 l.t Batt.y

Artillery



Field Horse } *Artillery*

9 Ammu.n Col.ns.

Pioneers

Pion.r Bat.n

Pontoon Tra.

[FIRST EDITION.]

PRÉCIS

OF

A RETROSPECT

ON THE

TACTICAL RETROSPECT;

AND

REPLY TO THE PAMPHLET

ON THE PRUSSIAN INFANTRY OF 1866,

BY

COLONEL VON SCHELLENDORF.

TRANSLATED BY

Colonel H. A. OUVRY, C.B.

(Late 9th Lancers.)

Ich bin nicht gekommen, Friede zu senden, sondern das Schwert.

LONDON:
W. MITCHELL & Co., 39, CHARING CROSS, S.W.

1871.

(Price 2s., by Post 25 Stamps.)

LONDON:
BARRETT & SONS,
MARK LANE.

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TRANSLATOR'S PREFACE.

I HAVE been urged by several officers of distinction to translate the reply to the two pamphlets on the Prussian Army, called "A Tactical Retrospect" and "On the Prussian Infantry," which have had so large a circulation both in Prussia and—in their English dress—in England.

This reply, which is entitled, "Ein Rückblick auf die 'Tactischen, Rückblicke' und Entgegnung auf die Schrift 'Ueber die Preussische Infanterie 1869,'" von, Bronsart von Schellendorf, Oberst-Lieutenant, beauftragt mit der Führung der Geschäfte als Abtheilungschef im Grossen Generalstabe—is really a critical examination of the tactical views contained in the Prussian Infantry, and, although bearing the name of a Prussian Colonel, is actually, in so far as the tactical reasoning goes, the work of Count von Moltke.

In the October number of the *Edinburgh Review* of 1870, appears an excellent article in which the following passage occurs (p. 492) :—

"The Author of 'Tactical Retrospect,' elated by the success of his vivid criticisms on the weak points of the Prussian Army in 1866, attacked in a new pamphlet the whole system in use at that period as still too restrained and formal; alleged that no exertions of higher officers could influence an action if the captains of companies were not fully trusted; and prepared a form for the attack which should supersede the column, line, and skirmishers, as devices effete and unworthy of the infantry of the future. General Moltke was forbidden by his official position to take personal notice of an anonymous assailant; but he replied in a pamphlet, issued not long before this war, in the name of his friend, Colonel Bronsard von Schellendorf; and those who study the discussion will see for themselves, not only that the veteran strategist has the best of the argument, but that his own mind has been busied during the peace with practical proposals for developing to the utmost the power of the Prussian Infantry."

In order that those of my brother officers who are not sufficiently acquainted with the original may follow the reasoning of so distinguished an authority, I now offer a *précis* of the *brochure* in which the question is discussed.

Any soldier who studies the diagram of the battle formation of a brigade, proposed by the author of the "Tactical Retrospect," must at once see that it is little more than one vast close column,

and is in direct violation of the very first rule laid down by the Author himself in the first chapter of the "Prussian Infantry."

There can be no doubt that the two pamphlets and this reply will be of infinite service to our Army in the reorganization which must inevitably take place; and here I cannot refrain from mentioning what fell from a French officer of the highest rank, who held an important command in this unhappy war. I was talking to him on the misfortunes of his country, and deploring the ruin which has fallen on France: "Ah!" he replied, "*L'Organisation Prusse.*"

During the few weeks which I spent latterly on the banks of the Rhine, some 150,000 men passed to reinforce the Prussian armies in the field—not 150,000 recruits, but that number of real soldiers. Would that these words, "*L'Organisation Prusse,*" would sink deep into the minds of Englishmen and urge them to action. What folly it is to say, let France and Prussia fight it out, it is no affair of ours.

"Tua res agitur, paries quum proximus ardet"

is a fit reply to such reasoning. Vain, also, is the argument, that Englishmen would not submit to an organization analogous to that of Prussia;

Englishmen need not be taught that the duty of defending their country is as much incumbent upon them as it is on other nations, and that if they neglect that most essential of all duties, punishment is sure to follow. England at this moment, in presence of the monstrous armaments of Continental nations, may be said to be almost defenceless, and were it not for the "silver streak," our existence as a nation would not be worth six months' purchase.

If it be said that such an organization would turn the country into one vast camp, I reply that it would only do so when the occasion required it; and would it not be better that it should be so, than that we should wear the chain of a foreign Power?

Instead of demoralizing, it would improve the *morale* of our people. Is the *morale* of the Prussian soldier inferior to that of other armies? Any person who has visited their hospitals would, I think, come away impressed with their superiority in gentleness and good behaviour to the soldiers of any other nation whatever; while as for their conduct and courage in the field, the Campaign of 1866 and the present war speak trumpet-tongued.

There can be no doubt that it is a melancholy spectacle to see what little effect Christianity has

over mankind as evinced in modern warfare, and more especially in the present war. Man seems to have altered little, as Goethe says,—"*der kleine gott der Welt bleibt stets von gleichem Schlag;*" and this being so, and since man still remains the same, it behoves us to look to it, and secure our hearths and our homes; and to do this effectually there is but one way, and that way is, in the words of the French officer,—"*L'Organisation Prusse.*" When I say Prussian organization, I do not mean the Prussian system pure and simple, but the principle of the same, with such modifications as may appear necessary; but the service must be compulsory, and must include all classes, no substitutes being allowed.

A writer in the *Fortnightly Review* puts the matter thus:—

"A real re-organization of the army in a national sense is out of the question, really to make it such an arm as the Prussian is simply impossible. The English never will be drilled into 'Bismarckism,' and any feeble attempt to Prussianize this country—to raise a conscription, in fact to force the working people into the ranks, will be met and resisted by all and every means. The attempt forcibly to enlist English citizens will be stopped by every resource known to a people defending their personal liberty—the *ultima ratio populi* not even excepted. There are men enough in this country quite capable of seeing what is meant, and of organizing the national resistance. To attempt such a plot against all the traditions of English liberty,

would be the end of the governing class, monarchy and constitution. No blood tax will ever be levied on English homes."—*Fortnightly Review*, 1st Dec., 1870.

In reply to this we may say that this is no question of forcing the working people into the ranks, but of forcing all persons to do their duty to their country, and if the ignorant impatience of performing that natural due which is evinced in the above extract should take root among the people of England, they must then take the consequences.*

In my opinion, the views put forward on high authority from more quarters than one, that the question would find its solution in the organization of the militia by ballot, with voluntary enlistment into the regular army, rest on no sound foundation; because the training in the militia, in the first place, would not be sufficient to make soldiers, and the men of that arm, as a rule, would not be found willing to enlist in the line. To make an efficient soldier in this country requires, at the

* Count von Moltke has pointed out that the difference between Militia and the Prussian system consists in the important fact, that the one is merely an armed raw levy, while the other is a nation of soldiers, trained to habits of military obedience.

very least, three years, but then the training must be continuous and not coupled with any other occupation.

H. A. OUVRY.

P.S.—I regret very much indeed to say that the Author of the two pamphlets to which this is a reply, has fallen in battle. I condole with the Prussian officers—they have lost a gallant comrade, and the Prussian Army the makings of a first-rate General. He was a Captain* in the 44th Regiment of Infantry.

H. A. O.

*Captain May.

PREFACE.

When at the latter end of the Autumn of 1868 the "Tactical Retrospect" appeared, we thought of making a reply to it, but after mature deliberation refrained from doing so, thinking that it was a production not answering to our ideas of military literature, and that it would attract little notice. It contained much that is undeniable, and many excellent conclusions, in which we fully agree; but those officers who attended the course of lectures on the History of the War, at the Royal Academy of War, will hardly learn anything new from it.

Notwithstanding, the pamphlet obtained much attention both at home and abroad, and even now among foreign armies there is a widespread notion that it proceeds from the pen of one of our most distinguished Generals.

We are well assured, however, that a Prussian General would know the army better than to hold

up such a distorting mirror of it. Even admirers of a piquante *feuilleton* style were offended at some of the views contained in that pamphlet. An attentive reader may easily perceive the circle in which the Author must have worked in the Campaign of 1866. There can be scarcely any doubt that he led a Musketeer Company of the 2nd Infantry Division, or that he was the senior officer of the same "eagerly waiting for the moment when, with no one above him, he would have nothing to attend to but the enemy."—*Tactical Retrospect*, p. 13.

Throughout the whole work, in so far as it can be regarded as an original production, there appears evidence that the experiences of the Author embrace a very narrow circle.

The book contains, in addition to good and indeed excellent ideas, a very distorted picture of Prussian officers and men, and further, it stamps the whole Prussian Army with the seal of the personal experiences of its Author; we see positive and original propositions for changes which we feel inclined to designate "Tactical Discords."—(Pp. 25 to 29, and 39 to 40, original.)

It is much to be hoped that the time will never come in which his views will be put to the test.

The reason we now reply to the "Tactical Retrospect," which has gone through several editions, and has been translated into foreign languages, is, that lately another anonymous publication has appeared, "On the Prussian Infantry, 1869," which, if not entirely from the pen of the same Author, may be looked on, at any rate, as a sequel to the same.

This one also contains extraordinary descriptions, and, indeed, impresses the whole Prussian Infantry with the stamp of his individual experience; and finally makes direct propositions concerning tactical forms, based on personal observation, which he presumes the breech-loader has rendered necessary.

Thus far the two *brochures* are in accordance. But the excellent ideas and deductions peculiar to the "Tactical Retrospect" are not so plentiful in the new work. The form of the two is similar, but the intrinsic value is very different.

We are convinced that the continual publication of *brochures* of this character does no good in the long run to the Prussian service. We consider, therefore, that a voice from the Army should be raised against them, and this task has been undertaken in the following pages.

The Author of those two pamphlets has re-

marked, that "a critic hurt in a tender point never respects those limits on which all free and social intercourse depends." Might we not ask the Author whether he himself in his criticism has kept within those limits? It may reasonably be doubted.

CHAPTER I.

On the fundamental principles for determining tactical forms.

THAT tactics become obsolete when the element—the soldier—has become essentially changed, may be generally admitted as true; but the question is, in what measure have our soldiers become changed? The introduction of the breech-loader, we hold, does not necessarily render the old tactics obsolete; neither is it true that an epoch has arrived in which as sharp a line can be drawn as between the tactics of the Seven Years War and those of the French revolutionary armies.

The infantry of Frederick the Great with muzzle-loaders in close order, could fire four to five times in a minute, which is only imperceptibly less than we can now do with the breech-loader.

How can it be seriously maintained that the tactics which suit a badly instructed and undisciplined army must necessarily, on account of those very qualities, lead to victory, and supersede those which have for their basis a careful education and a rigid discipline?

And even if at the commencement the French armies made a virtue of necessity, it stands to

reason that the column and skirmisher tactics were in themselves superior to the rigid line tactics, especially for the reason that it brought fire tactics into a more operative form, and afforded facilities for a greater freedom of movement in the field (p. 3 " Prussian Infantry").

There can be no question of an opposition between fire and shock tactics (p. 3, P. I.). Frederick the Great knew right well, and laid down in his regulations, that the front line was to be used to drive off, by means of a shock, an opponent who had been previously shaken by fire. At Jena the Prussian Army did not succumb to the shock of the French columns in front; it broke before they came in contact, from the skirmishing fire of the French *tirailleurs*, to which it was sacrificed on account of its deficiency in power of manœuvring. How, then, can we be justified in saying that the breech-loader has necessitated a total change in tactical forms ? On the contrary, it appears to us that we find ourselves in a constantly progressive development of the column and skirmishing tactics which has not yet come to a conclusion, and upon which the improved education of nations, as well as the introduction of the rifle, and finally the breech-loader, cannot fail to exercise a gradual and certain influence.

If we occasionally employ line tactics, this certainly does not involve the consequence that our infantry is called upon to perform the impossible task of representing two different centuries in

their education (p. 1). We concede that bayonet attacks with whole-battalion columns should not be employed as a rule; such attacks even with muzzle-loaders were not to be recommended, with the exception perhaps of one vigorous effort, on an already shaken line of the enemy; in which case the fire of the said line would not be more dangerous for a strong infantry column than for attacking cavalry. One advantage of the battalion column is, that after it has made its attack, which only lasts a few moments, it appears to be more fitted for further employment of all kinds than columns composed of smaller units.

Thus it never can be said that the column is no longer a battle formation.

CHAPTER II.

The column as a battle formation — Tactical units.

The principal motive for the total abolition of the column, adduced in the second chapter, p. 9, has in itself nothing in common with the breech-loader.

That the column, the principal factor of our infantry, is not a formation from which we can obtain the greatest value of a fire operation applies equally to small columns whose depth is the same,

and is a fact which has not been contested for the last fifty years.

Notwithstanding this, then as well as now, a formation was necessary for those divisions of infantry which were not immediately under fire, and which would render them fit and ready for all eventualities, and especially for bayonet attacks. But this last idea our author contests, and instances the Austrian attack at Chlum, in which, out of a corps of 20,000 men, there was a loss of 10,000.

This is contradicted by the Austrian official accounts. Their whole loss was only 9,599, including 3,469 unwounded prisoners, and was the result of the whole retreat at Rozberic and Wsestar, and was not sustained in the twenty minutes mentioned by the author.

The pamphlet goes on to say that such no doubt would be our lot (p. 10) were we to push forward a brigade to the attack according to the form in our regulations.

Here we have a mere battle with windmills placed before us; we certainly never knew that such was prescribed in our regulations, or that in the Campaign of 1866 it ever occurred that an intact army corps was defeated in twenty minutes in the manner described. While we cannot here agree with our author, we would simply ask him what would have been the fate of the 1st Austrian Army Corps, if under similar circumstances it had had the

battalion formation which he has proposed in a subsequent chapter? It is difficult to imagine that the result would have been more successful or the loss less. The Austrian defeat was caused rather by their endeavours to maintain *à tout prix* a position which had become untenable, and from crowding their masses in too narrow a space for their complete deployment, than from the tactical formation of the troops.

The assertion of our author that the fighting of battalions in column is the only method still retained in our regulations is still more unpardonable, inasmuch as it is not in accordance with fact. In the regulations for the infantry since 1847 the formation and employment of the company column is fully entered into; and at the beginning of 1869 a Garde infantry regiment was reviewed by the King, when the sham fight was carried out exclusively by company columns; and on other occasions and in other places this practice was also very general. And even if in this particular instance this should not have been the case, the author is not justified in reasoning from manœuvres on parade as to what forms would be adopted in an actual fight.

Our author says a tactical unit is that which *we* use to reckon in tactics. This is no doubt very plausible, but it will not suit generally; for all depends upon the word *we*, who it is that reckons, changes everything at once, when the *we* means a different degree of rank. An officer commanding

a regiment may reckon by battalions: and our author says expressly that the battalion fights exclusively in companies, the separate companies according to the orders and leading of the officer commanding the battalion, but never under his word of command, thus making the company the tactical unit (p. 15).

CHAPTER III.

Our present company-column fights—On half-battalions.

Our author's experience must have been within a very narrow circle if we are to trust to his description of the course of a fight in company columns. The three captains (p. 16) so joyful at their escape, and who have the intention of keeping away as long as possible, is a picture which would certainly never present itself to the mind of an officer in command.

With regard to half-battalions, they cannot be considered as altogether strange to our peace customs, as a peace battalion of 500 men is just equal to a half-battalion in war, and these half-battalion formations were proved to be good in three glorious battles.

The remark of the author—that the commander of the battalion should take pains to make himself acquainted with the mode of fighting by company

columns, and not imagine, that after a course of exercise in column-formation and rank-marching, that mode of fighting is to be understood as a matter of course (p. 20, P. I.)—is an uncalled-for reflection on the corps of field officers which merits an earnest repudiation.

CHAPTER IV.

On our formation.

Our author maintains (p. 21, P. I.) that now we practise in peace that which we *do not* intend to do in war. This is an exaggerated way of putting it. Although indeed, without doubt, we do practise much in peace time that we do not make use of in war, and perhaps much might with benefit be struck out of our regulations, still the delay in this reform which has occurred with us in common with other large armies has its good side.

So long as a battalion is considered in the light of a tactical unit, it should be exercised in parade movements by its commander, and at his own word of command.

The conclusion that the battalion exercise should be done away with, and the companies made into tactical units, is as little justified as that all movements should be made out of step.

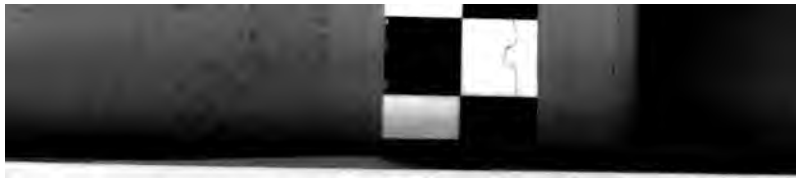
The author complains that there is a great deal of hurry scurry (*klipp klapp*) before inspections, and that the commanding officer is pronounced good or bad according as the inspection comes off. But these parade niceties are a necessity, and the commanding officer should be judged of according to the manner in which he handles his men. It must be a very weak Inspecting General who would lay stress on mere pipeclay. Bodily and mental freshness, energy and decision, capability of giving the word of command, acquaintance with regulations, and good horsemanship, are all brought to light at an inspection, and do not fail to have their effect on the troops. Our author concludes the chapter with these words, (p. 28, P. I.) "Therefore, away with all pernicious superfluities in our formations; it is full time." We fully agree with him, and say so too; but the difference which lies between us is, that our several views of what are pernicious superfluities are very wide apart.

CHAPTER V.

The duties of officers commanding companies, and the higher leaders.

The glowing description of the relations between the private soldier and his captain is perhaps the best thing in the whole book; unfortunately, how-

ever, the author adds a description of the relation of the soldier to his higher leader, which does not correspond in the same degree with the fact. Is it really quite correct to say (p. 29, P. I.) with regard to the higher grades of officers, such as officers commanding battalions or regiments, that "the soldier on the contrary has no personal relation with them, neither have those officers with him; he has a respect for them according to regulation, otherwise he is for the most part indifferent; at the very most he knows whether his General keeps him long at drill, or annoys him or not, and particularly whether he has any ridiculous habits" (p. 29). So far as our remembrance goes in the course of our service we should be led to opposite conclusions: it is quite true that the higher grades of officers are not brought into such near relations with the men as their captains, but the trusty and grateful disposition of our soldiers is very quickly manifested towards the commanders of our battalions and regiments when the men see that attention and care is bestowed upon them. Very fortunate it is that it is not necessary for our superior officers (p. 30) to try, by "acting and coquetry," to make themselves take with the men. We have known commanders of battalions who knew the greater part of their men by name, and the Campaign of 1866 afforded proofs how those commanders who were left on the field of honour were regretted by their men.



CHAPTER VI.

On firing volleys and skirmishing fire.

Our author commences this chapter with the following remark, "that in making a trial of new tactical forms, those in present use should not be directly violated; the new ones should be developed out of those which we have previously had" (p. 32). Our concurrence with him in this is as complete as our astonishment, for in the preceding chapters we find he completely rejects the column as a battle-formation, as well as the tactical unity of the battalion in the sense in which it has hitherto been understood, and proposes that the whole of our present battalion exercises, column-formations, and deployments, advancing in line and column, also should be done away with.

Our author remarks (p. 33, P. I.), "at present we have a skirmishing fire, quick fire, and volley fire; and here, at the commencement, the maxim may be laid down, that in war, volley-firing is only possible in the rarest and most exceptional cases;" and in order to depreciate the value of it, he seeks to turn it into ridicule. But can such means as this really lead any one astray who gives his earnest attention to it? Surely not. The value of a steadily-delivered volley-fire is not denied, but the conditions on which it depends, viz. coolness and efficiency in the leader and a fire discipline in

the troops, are contested. But why should we not still require from the Prussian Infantry that which for more than 100 years has been considered as a matter of course? It is not, however, sufficient for our author to abolish the volley-fire; he goes further, and says (p. 38), "Supported by the experiences of the campaign in which skirmishing fire alone was used (?), we must pronounce that a skirmishing fire decided the battle. The further conclusion would then be that we should carry out the whole battle in a deployed order, the close order being only for the march and preparatory formation." And what would our author say to the following deduction?—That as the infantry is the arm which decides everything in war, it naturally follows that we may do without artillery and cavalry altogether in battle. Both his conclusions, however, are untenable; an army can dispense with artillery and cavalry in battle as little as the infantry can dispense with the close order. In spite of his conclusions, the author is not of this opinion, as we shall see later. After he has rejected so much to which we have been accustomed, as a preliminary measure he feels the necessity of offering us positively new forms, the adoption of which in our regulations would certainly cause a very material alteration.

CHAPTER VII.

Formations of the deployed line—On the double step—Modes of attack with a deployed line.

The author opens this chapter as follows (p. 40, P. I.) :—"From our present closed formations, column and line, the column has been rejected, because it does not permit the full advantage of a musketry fire to be reaped, while it offers itself as a sure target for that of the enemy. The line formation is grounded on the principle of the volley, and with the rejection of that our present line formation must consequently be abolished. In all engagements of not too extensive a character, and in those on a field over which the view is impeded, the 'skirmisher swarm' is the only battle formation which can be effective." We wonder that this form is not also rejected, for it has its acknowledged weak points. The author is, however, of opinion that we should retain the "skirmishing swarm," and in this we fully agree with him. "In the pitched battles of more considerable masses, a formation will be required by which the troops can be kept more in the hands of their leader than is possible with the 'skirmishing swarm,' and which would unite the two points, viz. greatest possible effect of musketry, and least possible loss from that of the enemy." This important problem he

endeavours to solve by the formation of an opened-out line, having a distance between each file of about two paces. Here we are virtually invited to adopt a skirmishing formation which the Prussian infantry rejected some twenty years ago, with this difference, that then, aiming, which had little success, was required, with an arm not very excellent, while now we are told, that in spite of this preferable weapon, "the soldier takes no particular aim; he presents in a horizontal position, and pulls the trigger steadily." (p. 41, P. I.)

We would ask our author whether he has sufficiently pictured to his mind the idea of a perfectly horizontal direction. Let him suppose a case which seldom indeed occurs, but which is most favourable to his theory—that the opened-out line is opposed to an enemy totally uncovered on a flat plain at 200 paces distance. We will assume that by a horizontal aim the author means such a position of the axis of the bore as would enable the missile at a given distance to strike the enemy breast high. Any other presumption would manifestly entangle the question in an unfavourable sense.

Now apply the necessary mathematical law with regard to breech-loader projectiles, viz. that the deflection of the axis of the bore only one degree, at a distance of 200 paces, would occasion an error of more than eight feet at the point of contact. Does the author think that he could establish such a training as would correct this deviation

from a perfectly horizontal position without the aid of levelling instruments? As a right-angle has 90° it would be a question of 1-300th of that measure in order to hit the mark. To measure this correctly would be a more difficult matter than to judge whether an object was at 299 or 300 paces distance. The proposal of the author appears to be a retrograde step to the Prussian regulations of the last century, which laid down *that fire should be given breast high.** Very much better is it to keep to aiming, otherwise the bulk of the shots which are effective at from 100 to 200 paces would not be sufficient to render the fire effectual. But if we retain the principle of aiming, the opened-out line is not a favourable formation for defence. It appears a mere superficial and mechanical solution of the problem, which has all the disadvantages of the deployed form without its advantages, such as the system of forming groups, and allowing every individual soldier to aim carefully and take advantage of cover on the ground. In fact, we do not see why the quick fire of a well-placed line of skirmishers should not in any case be much more effective.

The opened-out line (which, by the way, would occupy nearer 300 than 200 paces if it were composed of 100 files with two paces distance between each) would be unable to utilize the ground, and a great part of it would either stand or march

* *Vide* "Cromwell's Manual and Platoon,"—"Give your fire breast high."—H. A. O.

exposed to fire. Our present formations are certainly far preferable—a strong line of skirmishers, with a closed support in the rear, at such a distance as cover or the ground permits.

In decisive moments the enemy can then be met by a volley from the supports pushed forward into the line of fire, followed by a bayonet charge. What can the opened-out line do better than this? Nothing, but deliver a disorderly fire, scattered over the whole of the front, broken at intervals by the space occupied by the skirmishers. Thus we consider ourselves justified in rejecting the opened-out line as a defensive formation.

Now let us consider it in an offensive point of view. The author observes (p. 40, P. I.) "that two points must be taken into consideration,—first, how to pass over the distance of from 400 to 50 paces before the enemy without being annihilated; and, secondly, how, under the circumstances, we may be enabled to have the troops well in hand in close order at the moment of the shock." In regard to the first point, he rejects the close order; and in the second point, the scattered order. Instead of the two forms to which we have been accustomed, he offers us the opened-out line, which unites the disadvantages of both for an attack. We may agree with our author that neither judgment concerning the nature of the ground, nor the double time, can be considered as a satisfactory solution of the question (pp. 42, 43), but we cannot consider it

as justifiable, or consistent with discipline to speak of superior officers as having "sovereign whims" or to characterize them as "severe task-masters." (pp. 44, 45.)

The attack then in an opened-out line rests on no better ground, and should be rejected, as it appears to offer no chance of a good result. The necessity for keeping the enemy under fire during the advance of the attacking division must be completely conceded; but the advancing body itself is little fitted to take part in it, as it would thereby lose time, and seldom hit its mark. The author holds that a regular fire is not necessary, but the fire he proposes would only make the unavoidable loss of time more seriously felt; he speaks, however, of having considerable recourse to fire, not only while on the move, but also on a point which is out of sight. This is an attack upon the fundamental principles of our musketry instruction, which cannot be too strongly denounced. True, he himself remarks (pp. 46, 47, P. I.), "Shots fired away as we have described may not have fulfilled their proper purpose of placing men *hors de combat*, but they would have had nevertheless a most useful effect in crippling their moral activity." We must say that the attempt thus to work on the moral element of the enemy is detrimental to our own *morale*, and also to economy of ammunition, which is a point that should not be lost sight of in the field. It is a well-known fact that in

action, firing is for the most part too hurried; it should then, at least, be directed against a visible enemy. What would be the result were we to train our men in peace-time to fire without aim at a presumed enemy? The condition laid down by our author, that such a fire should be opened only at the command of a superior officer, would hardly hold good in action.

The attempt to lead us into the employment of a fire, the principle of which is, that no aim should be taken against an invisible enemy is however only casually justified. The author also engages that his opened-out line shall obtain material results from its fire; it is to halt for a moment, and then, without any careful aim, to fire quickly; the conditions for the operation are here again described (pp. 47, 48, P. I.):—"In order that this fire should have a full effect, the soldier must be taught to bring his weapon to a perfectly horizontal present by a single movement, and then to pull the trigger without allowing the firelock to swerve." * This kind of firing, "which may be called quick fire in another sense, must become a second nature to the soldier, and, as flat plains are not always at command, he should learn to accommodate his aim to an undulating ground." "On these essential circum-

* The theory laid down for firing attaches no importance to the swerving of a weapon so long as the axis of the barrel remains horizontal.

stances depends the efficacy of the fire." Of this there can be no doubt. We never shall see men capable of performing this task, and may rest assured that the fire of such an opened-out line in movement would be nearly ineffectual, even though (p. 48) "a company of 200 men advancing 300 paces, and firing as we have described, would discharge 2,000 missiles during its progress." Such a body, if it were to fire as quickly as possible and then advance ten times, would lose thirty seconds of time, and thus be exposed as a mark for half a minute to the quick fire of the enemy's *tirailleurs*.

Let us now cast a glance on the shock power of the opened-out line. The author himself acknowledges its insufficiency, and therefore lays down that (p. 49) "we may cause an opened-out line, or an ordinary skirmishing line, to advance firing on a certain object of attack, upon arriving within 100 paces of which the signal may be given to close on the centre at the double, and halt; the whole would then stand in close order." We are further assured that "in this movement there is nothing complicated; on the contrary, it is quite natural, and may be attempted by any company without previous instruction." We have ourselves, for many years past, performed this manœuvre on the parade-ground on an extensive scale in a large garrison, and can affirm that it succeeded admirably. Immediately before the advance the men were informed of what was re-

quired from them, and every one doubled in to his proper place. But a superior officer, much experienced in war, who happened to be present on one occasion, ordered the movement to be discontinued, and we think he was quite right. So far as we can recollect, he was of the opinion that, on account of the scanty time which was allowed for practice, no movements should be made which were not laid down in the regulations as applicable for war. He feared, that what might succeed as a manœuvre on the parade-ground would fail entirely under a hostile fire. If an attack was to be made in scattered order, it should be so done that the groups might naturally remain together in themselves. If in close order, the troops should advance in close order, and their attack be supported by fire from stationary skirmishers, whose front should be for the most part free, which would not be the case with the opened-out line breaking through. Add to this, the individual files in the opened-out line would have to run through a material difference of space at the decisive moment, which would, however, have its maximum of speed on the flanks, unlike the centre, where the leader would presumably be placed, and which would be proportionately retarded. This is at once a drawback, and, indeed, would be very questionable, and at the last moment the line would be in a position little fitted to oppose a cavalry attack.

The above distinguished officer of rank went through the Campaign of 1866 with great renown,

and the author, it is to be hoped, will not misconstrue us if we hold that an opened-out line, some 300 paces long, which closes up for an attack when at 100 paces of the enemy, either with or without fire on its advance, is a formation little answering to the proper condition for an energetic assault.

CHAPTER VIII.

On supports of the deployed line—On deploying whole companies.

The author shows an ill-suppressed mistrust of the opened-out line, which he so strongly advocates when he requires another company in the immediate rear (that is, at about 60 paces) of the company which either stands or is advancing in the order which has been described. The service for which this company is destined leaves no doubt that it should be performed in column; the author, indeed, expressly says so at p. 58, but immediately adds, "In the first place, it is no battle formation, but a preparatory one, which enables it to be employed in any direction;" and then he continues, "Our company column will be generally good for this purpose. As to whether it should be formed into three or four subdivisions, whether the subdivisions should be formed one in rear of the other, or in sections on the centre, is of no importance;" and further on (p. 59): "It appears judicious to

allow a distance of four paces between the two ranks," with one pace interval between the files. Then the men would not "stumble over the ground and their own feet," or "a well-aimed grapeshot cause them to scatter." It may reasonably be doubted whether the splinters of a shell would all go through the narrow intervals thus left open. And here it may be remarked, that the opening out of the formation would cause a considerable increase in breadth and depth to be exposed to an artillery fire.

But the most amusing part of the proposition is, that our author here absolutely takes again into favour his rejected column. And if it be said that this is only a preparatory formation, still the eventuality of using it as a battle formation must also be included. Then we would like to know what the column which follows the attacking opened-out line is to do, when the latter requires an immediate support at the moment of its shock against the enemy?

Should it form into an opened-out line? Plainly impossible, for it would have no time to alter its formation; it must rather attack with the bayonet in as close a form as possible, and seek to break the opposing force.

We acknowledge most thankfully that the author in his proposals has restored to us the line in close order, as well as the close column, both of which we most certainly require as forms for close fighting; but in doing so he

has gone astray wonderfully in his application of them.

Let us now turn to the rules which are specially laid down for a battalion which takes the offensive.

The *brochure* in the first place demands a company opened out into a skirmishing line, having a front of from 300 to 400 paces, which is to advance to from 400 to 300 paces from the enemy's formation, and then take up a position; 200 paces in the rear, that is, at 600 from the enemy, a company in opened-out line (which, according to the reckoning previously made, will occupy nearly the same extent of front as the skirmishing company), and, 60 paces in rear of the opened-out line, the two remaining companies in column.

The course of the attack is thus described: The company formed in an opened-out line advances at a quick pace on the line of skirmishers, goes through them, firing on the move as soon as it is free. The skirmishers, who are lying down, support by a flanking fire as they find an opportunity.[?] The other two companies follow as supports at 60 paces. The great weakness of this attack may be seen from the following considerations:—

1. The skirmishing company which has taken up a position at from 300 to 400 paces from the enemy, would not, even so long as its front remained open, fire with any considerable effect if we consider that the enemy's skirmishers are under cover. What, then, is to be gained by this target practice at from 300 to 400 paces?

If the two companies who are represented as lying down be destined to prepare the attack of the opened-out line, they should gradually be gaining ground until they have approached to within an effective distance of the enemy. This would be at not over 200 paces. If the gradual approach of the skirmishers is impracticable, the opened-out line would not be able to do much.

2. The opened-out line almost completely masks the fire of the skirmishers so necessary for the support of its own forward movement, inasmuch as they both occupy nearly the same extent of front. The fire of the opened-out line can have very little effect; its advance may thus be characterized as the attack of a deployed line without a sufficient preparation, which halts and fires on the way most unnecessarily.

The proposed closing up of the files for the attack at the last moment is, to say the least, problematical.

3. The two companies follow the attacking line from the commencement much too closely; if they continued their rapid advance they would soon be at the heels of the former on account of its continually halting to fire, and perhaps would even pass through it. It would be far better for the supports to be posted at the commencement, and follow at 150 paces.

4. The last space which must be passed over under the hottest musketry would have to be done unsupported by skirmishing fire.

5. In the case of the attack being repulsed before coming to a shock, the three companies are affected at the same time, a rally on the fourth is hardly practicable; and it is impossible for the skirmishing company to fire on the closely pursuing enemy through the retreating opened-out line. A flanking fire is as equally impracticable here as it previously was to prepare the attack.

6. Again, it is a manifest error that the companies throughout are only employed one in the rear of the other, and that the commander of the battalion has nothing properly in hand.

The whole formation appears to be reckoned solely as a supplement to the opened-out line. With the rejection of this, the author himself even would not insist that the leading of the most extended skirmishing line would be a proportionately easy task.

A common leading of the line can only be brought to a general expression when the conditions in front of it are generally approximative.

In most cases the situation will not be the same on both wings, consequently different measures will be required on each. The decision as to the measures which the situation requires should not be left to the Captain; the officer commanding the battalion should reserve this for himself. It would also be preferable, when a battalion is working with a larger force, and wishes to occupy an extent of front of from 300 to 400 paces, that it should push forward two companies in the same line.

Endeavours should then be made to gain ground with the skirmishers. It will soon be apparent on which wing the most favourable opportunity offers for an attack. After reinforcing the attacking wing, supported by a well-sustained musketry fire, the skirmishing swarm advances, delivering a sharp fire on the move, to the attack, which takes place by the grouping together in subdivisions, who rush on the enemy.

The closely following support of the company placed on this wing, as well as an advancing column hitherto kept in hand, serve to secure the success of the attacking skirmisher swarm, which effectually masks them from the enemy's fire.

A perfectly intact company serves as a reserve, another on the other stationary wing in the first place operates to the front by a musketry fire, and is ready to act either formed as it is, or by a flank movement, or by a volley from the support if necessary, to arrest the retreat of the attacking companies, which may possibly have been repulsed.

If the circumstances should indicate an attack on the whole line, the skirmishing swarm and its supports advance in the same manner as those on the wing which we have described.

Here, also, at least one company should form a reserve.

No rules can be prescribed for a battalion which acts alone as to the employment of its four company columns. The very best forms here would

be worse than none at all, inasmuch as they would fetter the judgment of the leader, who should be left perfectly free as to their disposition.

CHAPTER IX.

Results from the preceding.

Two positions are mentioned by our author as the results of the preceding.

1st. It is to the value and self-reliance of thoroughly educated soldiers, as well as of every officer, to which we must look in order to see the direction which must in future be taken for the forming and education of the army; and (p. 60, P. I.)

2nd. "Command can no longer consist in that which can be clearly and expressly laid down by rule; general directions only can be given; the 'how,' and in many cases also the 'what,' must be left to the subordinate officers, and perhaps also to the soldiers themselves."

Both these propositions are undoubtedly correct, but what is there in them to force us to adopt the opened-out line of our author?

With regard to the first of the above positions, it applies to all epochs, even though it may have been in a less degree important. No person would venture to deny the conclusion that purely good soldiers and purely good officers

together would make an efficient army, and the only controversy which could arise would be as to the proper requisites for forming such individual officers and soldiers.

We can also agree unconditionally to the second position, so long as the directing officer retains, in addition to the duty of giving orders, the right of assuring himself of their judicious execution, and when feasible to enforce them by more direct control. The case of a subordinate having less intelligence than his superior should not be left entirely out of the question. When a superior knows with whom he has to deal, he will either enter more into detail when he gives his orders, or will himself see them executed.

That any one should take occasion, under shelter of the otherwise generally acknowledged principle that a proper independence should be allowed and indeed required from subordinates, to threaten us with a return to the condition of savages, is a proceeding which is beyond our experience.

The author concludes the chapter with these remarks (p. 63, P. I.):—"In the strife of the individual armies of Europe for the leading place, those powers will not gain the day whose arm can be discharged ten or twenty times in a minute, but rather those who demonstrate in the most substantial manner the enlightened views of the present time. Our age strives after the spiritual emancipation of the individual, and the national moulding of States. Those armies will gain the

palm in which every single member is filled with individual self-consciousness and national pride."

This sounds very fine, and no doubt will be much applauded from many directions; but we soldiers must not rely on "individual self-consciousness" and "national pride" alone.

A certain dose of these qualities is sufficient for our purpose, if the men are imbued with faithfulness, zeal, and discipline, and are well exercised in the use of good weapons. These are the points towards which we should now as formerly direct our efforts. Then the army will be a useful instrument in the hands of its leaders.

CHAPTER X.

On conducting a battle.

The author maintains that when troops are let loose in a close fight, from that moment they cease to be amenable to leading, and that it is therefore clearly indicated that no more men than are absolutely necessary for the object in view should be allowed to get out of hand. It is further recommended that firmness should be shown when requisitions for supports are made, but we need not be called upon to believe that (p. 67, P. I.) "there was scarcely ever an officer detached for a special purpose, who did not almost immediately send back word to the rear that he was too weak, and required considerable

supports." We then have a circumstantial explanation of the value of a strong reserve at the end of a battle, which we should not have been surprised to see in an old compendium on tactics. As all these positions are founded on the psychological element, they hold good for all epochs. Thus there can be no doubt of the justness of the theory, but their practical application to the actual case may be doubted ; here, knowledge under the pressure of the battle must show itself in practical action, and this requires qualities of character which the most thorough theoretical attainments will not guarantee.

The author requires that commanding officers should accommodate themselves to the troops, and not fail, as he said they did in the presence of the new and surprising tactical phenomena (p. 64, P. I.), "to understand how to improvise immediately a new means of commanding, but on the contrary clung to the obsolete fashion of an earlier period."

But it appears that the condition is not as he puts it. We have generally been accustomed to employ those forces in action which we exercise at manœuvres; and in this the company column, founded on the independence of its leaders, have had their value fully acknowledged. If the latter in the heat of the battle adopted less regular forms than were desirable, it is very unjust to cast the blame principally on the field officers.

The preservation of the order in leading the

larger divisions is only possible when the subordinate leaders strive as much as possible to keep themselves in their accustomed places, or to return to them as quickly as possible should the eventualities of the fight have caused them to disperse. This is a requirement made by every company leader on his subdivisional leader, and by the latter on his section leader. Shall not then the commander of the battalion require the same from his company leader, even though he has a more difficult task, because it embraces a greater space, and in the performance of which the adjutant, who has dismounted in the close fight, cannot materially support him? But the company leader can do so if he strives to keep up the connection with the commander of his battalion and awaits his further instructions.

The word "Forward," addressed to a company leader by his commanding officer, however, certainly does not mean, "away out of my control for the rest of the day."

CHAPTER XI.

Manœuvre tactics—Battle tactics.

The generally acknowledged difference between a manœuvre and an actual fight; the considerations which regard the order of the first, and which are often in contradiction to that of war; the circumstance that no loss is suffered by the bullets of the

enemy, and, on that account, that the moral element has not its proper weight; the unpleasant fact for the leader to whom it applies, that a fight on the retreat at manœuvres is nearly as thankless a business as in war; all this, and much more, has absolutely nothing to do with the breech-loader.

The author reckons up all the failings and abnormities which are a necessary consequence of our manœuvres, while at the same time he acknowledges their undeniable advantages.

We learn to our surprise that (p. 71, P. I.) "in war, fighting only takes place when the object cannot be gained without," and that "freedom of operation in the leader is based on uncertainty with regard to the enemy."

According to this it appears that we are not justified in inflicting material loss on the enemy should an occasion offer, if we can attain our object without it; while we, on the contrary, have always been of opinion that it was our business to attack the enemy wherever we could do so with advantage, without consideration for any particular object or charge with which we may have been commissioned.

From the whole description which the author gives concerning the order and course of our manœuvres, it would certainly appear that he considers them altogether pernicious (pp. 74, 75, P. I.): "The anomalies perpetrated sink deep into the minds of the troops, and poison the

judgment of those officers who are not intellectually self-dependent." (p. 74, P. I.) "These manœuvre tactics have seldom any enduring influence on the minds of officers who are independent thinkers." But the *brochure* does not reject our manœuvres altogether, on the contrary it says that they have undeniable advantages, and then proceeds to describe them as "poisoning the judgment."

The apparent contradiction appears to have its solution in the supposition that the manœuvres in general are very good, and that it is only those in which the author himself took part that have excited his displeasure.

We feel strengthened in this view when we more closely examine the description of a manœuvre on a large scale. (pp. 75, 76, P. I.) Here the rays seem to have become distorted in a very peculiar manner before they entered into the eye of our author, for it is to be presumed that he is describing that which he had himself seen.

He puts the very natural question (p. 76, P. I.), "It may appear very remarkable, that if these defects really are so very apparent, that officers who command in these manœuvres, and who are tried men, have not endeavoured to make a reform;" and the rather uncivil answer is,—"During the review both time and inclination for critical contemplation is wanting, and when we have returned home for repose, inclination and time is still not to be found."

Can a groundless judgment, which endeavours sarcastically to strike a deathblow at the loyalty of our highest officers, tend to promote that "free and pleasant social intercourse" on which our author in his preface lays so much stress?

CHAPTER XII.

Importance of local fights in the tactics of the future—Forms of battle for infantry against cavalry.

It must have been a very peculiar association of ideas which led our author to treat in the same chapter concerning the importance of local fights in the future, and the forms of battle of infantry against cavalry. Although in our introduction we have promised to follow the thread of the development of his views, we will here so far depart from our intention as to take the last point first, and dismiss it with the simple remark that we agree with the relative views of our author, who makes no direct proposals for any change in the forms for infantry against cavalry.

But we cannot give our entire assent to what he has said relative to the importance of local fights.

We at once confess that in our opinion the so-called "key" theory (p. 81, P. I.) no longer exists. But the views of the author, that in the conditions of a guerilla war, local fights form a substitute for a deficiency in military force, is generally valid.

The local fight is still a resource for the weak side at the present day, and the observations directed against this view, based on the Campaign of 1866, speak more in favour of it than otherwise. The desperate tenacity of the division Franseky in the wood of Maslowed against the gradual preponderance of a fourfold force, was decidedly favoured by the wood itself. Therefore it may very reasonably be said, that if the strongly fortified Chlum had been regularly occupied, the 1st Garde division would not so easily have made themselves masters of it. At all events, the appearance on the scene of the division in question was of importance, not because it occupied a wood or a village, but because these were situated in such a position with regard to the order of battle of the hostile army, that (whether right or wrong may be left out of the question) the Austrian leader considered it highly objectionable to allow them to be occupied by Prussian troops. The locality, however, rather favoured the occupation; but it might have, as at Chlum, rendered it more difficult.

The simple turning of such localities, as recommended by the author, has already been subscribed to theoretically, but probably the proposal is only feasible when the localities in question lie isolated before the position of the main battle formation. In such cases they will often render a direct attack necessary, and thus become of the greatest moment, even the centre point of the battle.

CHAPTER XIII.

Forms for the "ranged fight" of a brigade.

In his exposition of the want of more determined forms for the ranged fight, and particularly for masses concentrated on level and open ground, the author demands, in addition to the principles laid down for our field-exercise regulations for the infantry, that—

"The brigade should be considered as the largest body composed of infantry battalions for which it is necessary to have any fixed forms; and that—

"The principle of the employment of battalions must be the same for a single regiment as for a brigade."

Thus far the agreement. But the forms proposed are altogether different from those to which we have been accustomed.

We will first speak of the normal battle order of the brigade—of two regiments composed of three battalions—without previously touching on the internal formation of the latter; and further, let us lay it down as a principle that the normal *rendezvous* formation is a consequence of the normal battle formation. Then there is no longer any question about the former.

With regard to the latter formation, the author gives in his allegiance to the view which has recently been put forward from a direction well

worthy of attention, that an infantry brigade should not draw up its regiments "line-fashion," one in rear of the other, but "wing-fashion," one by the side of the other.

For this latter form it may, in the first place, be alleged, that it has more depth than that in "line-fashion," yet in spite of that (on account of the more intense fire power which is now possessed by the infantry), a diminution of the front development is not necessary, and that even from the point of view of its own losses, a less dense front appears to be desirable.

These considerations are of much importance, especially in the case where a brigade is drawn up independently and not within the narrow frame of a larger body, or if two separate though close-lying objects of attack, or defensive points, are assigned to it, which do not render a united command in the front line necessary. Under this last supposition, line commanders can be dispensed with and wing commanders employed.

The supposition, however, lies at the ground of the idea of the so-called "ranged fight" of a brigade, that the said body is drawn up as part of a larger army corps, in which a main reserve is included. The brigade will then form a part of the whole body, or even constitute a component part of the main reserves.

Such a destination naturally leads, with reference to the depth, only to an organization in two chief lines, the first of which serves in the first place for

the opening, and then as far as its power goes for the carrying out of the battle; while the second, temporarily held back, will have to secure the success of the front line. These duties remain essentially the same in attacking as in defending. So that the second line, rejecting the principles of relieving (or changing lines), closely follows the first line in the course of the attack, and in the defence takes its place at the proper time in the battle formation of the first line. The second line should not deliver a second fight, but should quickly support the first line when necessary. Its employment answers more nearly to the idea of a special reserve, for which reason, during the opening of the fight it should be kept at a considerable distance to the rear, which will often be indicated with regard to its own cover.

We may agree or not with the propositions which are before us, but in any case the question cannot alone be decided whether the brigade shall be organized line-fashion or wing-fashion, from the point of view of the strength conditions from front to depth; always presuming its whole strength at six battalions.

That which is essentially characteristic of both systems becomes much more apparent when we suppose a brigade to consist of only four battalions, formed of two regiments, each of two battalions.

Undoubtedly, according to the normal battle formation, two battalions in the first line and two

battalions in the second line, would here be required. Ought we, therefore, to draw up the two regiments one in rear of the other, or place them side by side ?

It will be maintained by the partisans of the latter alternative that the support of the front line will take place at a more suitable time, and be more efficient from bodies placed one in rear of the other if they are under a common command with those fighting in their front; and further, that there, the battle line being supported from its rear will not be mixed up with men who do not properly belong together.

These observations are well grounded, however the question may arise, whether the organization in lines, which offers advantages in other respects, cannot also be justified.

The supports of the line in front may be required either generally or at particular points, for example, on one wing. In the first case the whole of the second line would be brought into operation. This would be carried out at the order of the Brigadier, and the requirement that the body to be supported and the supporting body should be under a common command would be fulfilled generally, if not at any particular spot.

If, on the other hand, a merely partial support of the first line is requisite, it may be done principally from the first line itself, and that, indeed, by those portions which are nearest to it, and less threatened. The participation of this support

would besides be quicker, on account of its greater vicinity, and with respect to its direction it could come up more efficiently against the enemy's flank than a support brought up from the rearward.

A system of this kind, however, has for its supposition a broader organization of the first principal line in itself with regard to its depth, and plainly conditions united command relations in the first line.

Looked upon, therefore, as a form well calculated to afford a timely and efficient support, the forming of the regiments one in rear of the other is not to be rejected.

Now with regard to what relates to an intermixture of troops not belonging to the same divisions, this unpleasant condition would certainly be caused by the last recommended formation as soon as a question occurred of a united support of the first line by the second. On the other hand, in the case of the support required being only partial, and taken from the first line itself, the line formation of regiments is to be preferred from the point of view of preservation of internal order.

It is, however, to be acknowledged that since almost every long-continued battle would finally lead to the employment of the whole of the second line, the last-mentioned formation must always lead to a mixing-up of the divisions of the different regiments, while the wing-fashion employment of the latter would merely occasion the same inconvenience with regard to battalions.

Hence, if it be at all doubtful which of the two formations should be preferred as the normal battle formation, considerations of another nature may perhaps tend to settle the question.

In the first place we should consider the position of the Brigadier. In the "wing-fashion" organization he must renounce his influence on the leading of the engagement of the brigade, in so far as it consists especially in an economical regulation of the force which is temporarily kept in hand in the rear, and thus his judgment of the proper time for the employment of the second line. This last function devolves as a divided charge on the personal judgment of the commanders of the two regiments. It is no longer the fight of the brigade, but of the two regiments, in which the Brigadier sinks merely into the leader of the first line formed from the head of both regiments.

A main reserve of two battalions out of a force of six battalions, in some rearward position over which the Brigadier freely disposes, will only be posted on an occasion when no other detachment has previously been sent away, and the General of Division has not required the abstraction of a reserve for his own disposal.

The officers commanding regiments in the other case assume in fact the same degrees of command as fall to the Brigadiers in the formations for a ranged fight of a division; while the efficiency of the Brigadier does not thereby attain that of a

divisional officer; for an officer commanding a division would essentially supervise the working together of the three arms, and the timely employment of a main reserve in the rear, while his two Brigadiers should only lead the mass of the infantry.

On the other hand, if he would form this arm, as is the practice in the French army, by brigades drawn up one in rear of the other, not only would the lines, under the conditions of the present day, be too long for the leading of the Brigadier, but the characteristic position of the officer commanding the division would be lost; he would, in our opinion, degenerate into a mere Brigadier. The French organization, also, has hitherto, in a certain manner, given expression to this, in the fact that the infantry division of thirteen battalions has only two batteries and no cavalry at all assigned to it.

A Brigadier thus appears superfluous if, in a pitched battle of the larger bodies of troops, the regiments are placed one by the side of the other, as a normal battle order.

But it is a most undoubted fact, that in other respects we cannot dispense with these General officers.

From the point of view, therefore, of utilizing the powers of our higher leaders, it is justifiable to organize "wing-fashion" the larger bodies of troops composed of the different arms for which regulated forms do not exist, but for the smaller

bodies downwards, in most cases preferably in lines.

It also responds to this principle, that in an isolated fight the three battalions of a regiment should only exceptionally be drawn up one by the side of the other; ordinarily they will all three be formed up one in the rear of the other, or in two lines of one and two battalions each.

In the single battalion, the organization in four companies prevents the pure formation in line. We shall generally have only two, or three lines, in the last case of unequal strength.

Accordingly opinions do not diverge as to whether we shall, on principle, organize all bodies of troops wing-fashion or line-fashion, but the question is, where the line should be drawn below which the wing-fashion organization shall cease and the line-fashion begin. At present the brigade forms the body to which both parties lay claim to as the limit.

We will now return to the brigade, and complete what can be said for its organization in line.

It is a reasonable demand that the order of march of a body of troops should favour their development for action. This undoubtedly is most completely the case when the several divisions of the troops in the order of march are ranged in the same sequence of ranks in which they would be led into action. The wing-fashion

normal organization of the brigade would accordingly require an order of march, in which the regiments would march, not closed up in rear of each other, but with their battalions mixed up. This condition has not escaped the author of the pamphlet we are considering; he, however, looks on it as a matter of indifference, and besides, gives his opinion that usually each regiment may have its own mode of disposition. We doubt this latter part of his opinion, and can as little subscribe to the first, as it is well known that the march is almost a daily occurrence of troops in warlike operations, and hence a breaking up on principle of the link of the command in the order of march should be avoided.

If the above-mentioned views should elicit doubts as to the expediency of making changes in our regulations in the direction spoken of, we should certainly have every motive for retaining those at present existing, which have the sanction of custom, and, as we can have but one normal battle formation for the brigade, to hold by the hitherto acknowledged organization in lines.

In spite of this, it must be conceded that in an extraordinary number of cases a formation of both regiments one by the side of the other is necessary through the requirements of the fight, and such as would naturally develop itself during its course. But then the conditions of "a ranged fight" will be wanting in a greater or less degree, and the Brigadier, having to dispose of troops of

all arms, would be mostly free from the fetters of regulations, an event for which those we have at present give the requisite latitude.

We now turn to the further deductions of the *brochure*, and agree with the author in rejecting the possible making of chess combinations with the twenty-four companies (P. I. p. 86), and also (p. 87) of "the Adjutants tearing about in all directions, who, by continual orders, often contradictory, and not in accordance with the situation, undermine all independence in the officers commanding, who are thus kept in leading-strings."

At the same time we wish to guard ourselves from the supposition that we hold such general exhortations as in anywise called for. When special deviations from orders received, become necessary, they must find their solution experimentally.

In the next place, our author protests afresh against the formation of a battalion in columns from the centre. He is of opinion that these columns rest on an obsolete view—consideration with regard to inversion. We certainly cannot hold this view as altogether obsolete, though we confess that we must require of our soldiers that they should feel themselves at home in the inverted order. In action, inversions should not purposely be made, but should be avoided if practicable; and it is the duty of the leaders of all ranks to pay attention to this, and for this reason, all tactical

forms which tend towards their avoidance have their value.

The author says (p. 87, P. I.):—"The column we now have appears a helpless mass, a kind of 'chest,' of from 60 to 70 paces in breadth and 35 paces deep, harassing to the men, and unhandy for the officers."

But what then does he offer us in the place of this formation? The four company columns drawn up one in rear of the other, thus, a "chest" of 32 paces in breadth and 50 paces deep, whose apparently somewhat narrower dimensions are only to be attained by crowding together the same number of men within the sides of the "chest."

And shall we, for the sake of this, alter the forms to which we have been accustomed?

The object desirable in itself of keeping the companies together without any innovating changes in the regulations, is to be attained, if the column on the centre is always formed in company columns. Thus we may peaceably keep our "chest."

In the advance of a brigade to the fight, the author speaks against marching off in sections or in files from the centre, and, as it appears to us, correctly. We should hold it highly advantageous if this very inconvenient formation (to the adoption of which, however, during the march there is no obligation) were wholly done away with, as well as the regulations for passing through a defile.

That it would be much more suitable to the purpose to march and to defile by companies, which

also aids the quicker drawing up in the normal battle formation cannot be doubted.

On the other hand, we must protest against the views of the author, who rejects the maintenance of a strict order of march and the regulated distances. Certainly, when each regiment or only each brigade has but one road at its disposal, the march columns may be extended at pleasure.

But if we are obliged to move larger masses, such as a whole army corps, with only one road at disposal—a case which often happens—the speedy development of troops for a fight would be placed in a very questionable position, if the habit of marching in close order has not been previously acquired. The forming up of the tail of the column would be delayed, not a few minutes, but for hours, and the smallest space of time would sensibly weigh in the scale when the question was the decision of a fight which had already lasted several hours.

Let us now accompany our author in the attack of his brigade. In the first place, at the moment in which the brigade enters the battle line, that is, at about 2,000 paces (p. 88, P. I.) within range of the enemy's artillery, he recommends a new formation.

He says that there can be no more convenient target for the artillery of the defence than dense infantry masses at about 1,800 paces, and that the distance can by good maps be estimated to a single pace. (p. 89, P. I.)

His first statement is correct, but the latter never can be the case. The small scale on which the very best war maps are necessarily made (even in the rare case of a battery leader being able to fix correctly on the map his own position, and that of the enemy who is to be fired at) would not permit of a measurement to within 50 paces. A battery leader would make a good guess if he were to determine correctly by means of the map within 100 paces. This statement alone shows how little reflection the author must have given to the subject when he made it.

For the rest we are of his opinion, that the infantry brigade would have to paralyze the effects of the artillery by a formation corresponding to that purpose. (p. 89, P. I.)

He proposes that the brigade should draw up in three lines of two battalions, taking up about a maximum breadth of front of 800 paces; that at the same time four company columns of each battalion should march side by side with an interval of 50 paces between them, while the three battalions should be posted at 50 paces distance, one in rear of the other. This gives for the whole brigade a front of 800 paces, and a depth of some 200 paces. Within this space the twenty-four company columns are to move by a fixed rule, which however they may relax according to the nature of the ground, in order as much as possible to avoid loss.

Whether the last object would be attained in a

sufficient manner appears to us to be very doubtful. The whole body has, in the first place, a too narrow depth (of only about 200 paces) on the whole for the organization in three lines, and is very crowded.

If we imagine such a ground in which a well-covered advance of a brigade formed in this manner is possible, a ground in which, as our author writes, the artillery can only fire in about the direction in which it knows the infantry to be advancing (*i.e.* are not yet in sight)—why, one of our brigades, formed according to our present regulations and deployed for battle, might advance the whole distance without suffering in a material degree.

On the other hand, in a field which offers a favourable range to the artillery, the formation of our author would be little suitable. Much more to the purpose in such a case would be the deployment of all the battalions, and, if practicable with reference to freedom of movement, in the next place to form each subdivision in file, whereby the lines, one in rear of the other, would each have to take up a distance of 300 paces.

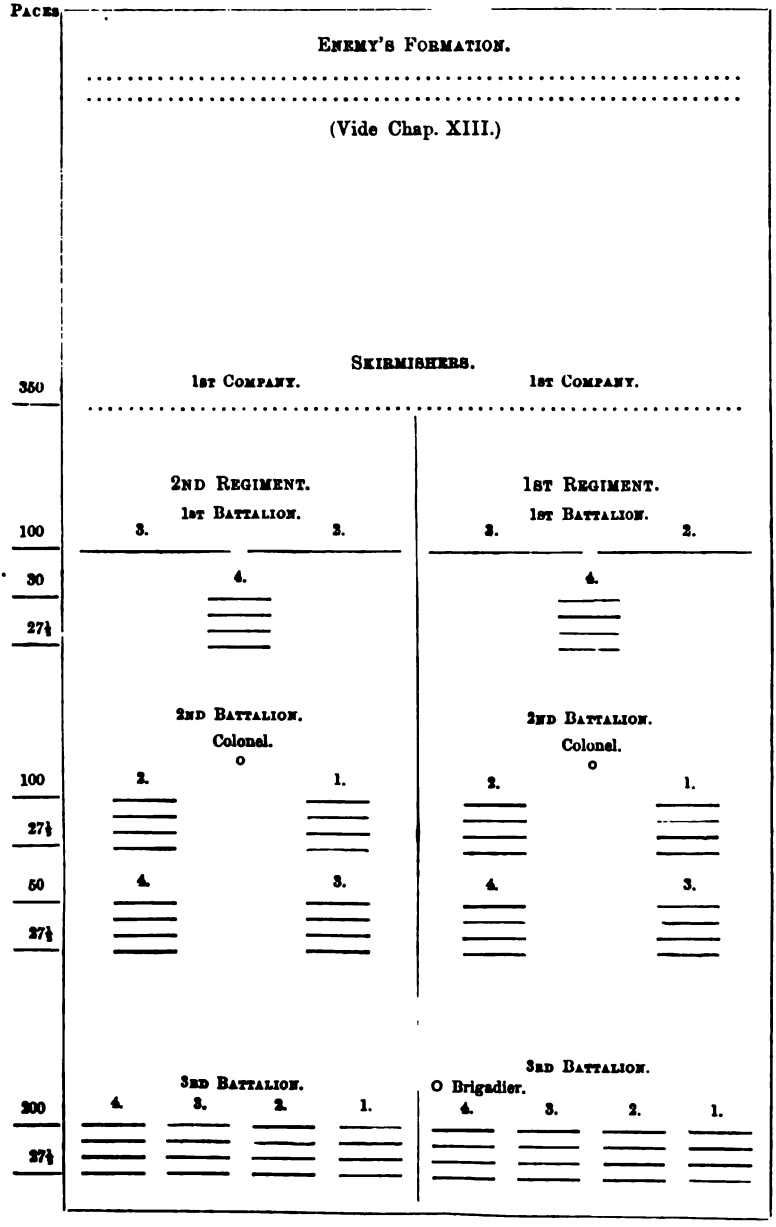
At about 800 paces from the enemy (the tail, or the last line, would be distant 1,000 yards from the enemy) the author takes up his battle formation. This is to be done thus: — After the two commanders of regiments (p. 90) have received their orders for the attack, the two front battalions each send a company forward deployed as skirmishers,

at about 100 paces; in the rear of these follow two companies, and the fourth company follows at 30 paces; the two centre companies are to advance deployed (p. 91, P. I.).

If this deployment of the centre companies is meant to be in opened-out line, they would require a breadth of front of 1,200 paces.

The second battalions follow at 100 paces in the rear, their four companies in two lines with a distance of 50 paces. Finally, at the greater distance of 200 paces, the third remaining battalions of both regiments, each formed into four company columns, one by the side of the other, bring up the rear. Let us represent the formation by means of a graphic sketch, which, with reference to "chess combinations," appears at least suspicious.

Battle Formation of a Brigade of Two Regiments according to the Proposal of the Author of "Tactical Retrospect."



The development for the fight takes place to the front, in such a manner that the two rear battalions (which as the foremost companies were 800 paces distant from the enemy's position will have a distance from the same of about 1,000 paces) must at once halt; and thus it seems as if the proper battle formation is not taken up soon enough.

And further, as in the first place a preparatory fight would last some time before the regular attack, the rear lines would have to be kept much further in the rear, because a ground that would afford them cover in such near vicinity is rarely to be met with.

The author, it is true, makes the proviso that the brigade has only to bring to a conclusion an already commenced fight, and that the direction of the attack, as well as the whole situation, is already fixed by the course of the battle which is in progress. (p. 90, P. I.)

But where are we to look for the troops which have been previously fighting on this ground?

By answering this question, as well as in discussing the "ranged fight" of the brigade, it is necessary to put out of the question every consideration as to the extension of the wings, as we must suppose that the brigade is acting with other troops, either advancing in the same line, or halted. We may then take into consideration the following points:—Are the divisions which are described as

hitherto fighting, still engaged before the front of the brigade? if so, they would mask the fire of the front line, which then would have been in a better position if it had not to be thrown out into a line of skirmishers. If the troops already engaged have been driven back and are still within the space which the brigade is to take up, the commanders of the battalions of the second and third line might justly feel that they would much rather have still kept their battalions together—a sentiment which, without doubt, would be shared by the commanders of regiments and the Brigadier.

Finally, if the troops which have already been in action are to be found in rear of the brigade now making its appearance, it would be a question of a new battle for the latter, which, if it did not wish to experience the fate which happened to the Royal and Imperial 1st army corps at the attack of Chlum, would require a fresh and judicious opening; but certainly a quick fire of the two foremost companies at about 350 paces could not be regarded in that light, for reasons which have been before stated.

The view of the advance of the four opened-out lines,* which at any rate would take place very soon after the opening of the quick fire, and for which the front development would be insufficient, appears as little likely to ensure success; neither

* This is manifestly an error on the part of Col. Schellendorf; it should be "of the opened-out line of four companies."—Tr.

could a good result be guaranteed from the "artillery firing when it comes within 1,000 paces on the point where it either knows or conjectures the hostile reserves to be posted." (p. 91, P. I.)

In the first place, the task of the artillery would be for the most part impracticable. It is to fire into the enemy's reserves (either in sight or at a venture) at the distance of at most 1,000 paces. How far are we to suppose these reserves to be posted behind the front of the enemy's line? If the ground should offer no cover, at any rate at least as far as our author keeps back his own reserves, that is at some 600 paces. According to this calculation, his artillery would be nearly in, or at any rate very near, his skirmishing line. I then their fire is to have any effect on the *tirailleurs* of the enemy which are under cover, what has his own artillery to await from the fire of the latter?

The very utmost that we have a right to require from the artillery in an attack is, that it shall accompany us to within about 600 paces of the enemy's front line; and in this case it cannot always fire into the enemy's reserves at 1,000 paces.

The idea that the four battalions can be employed for the regular attack on the whole line is in itself certainly not incorrect, so long as the brigade is organized wing-fashion, and has thus still kept back two battalions. We can, however, have little confidence from the manner in which this attack is managed. We have already spoken

of the prospective efficiency of the opened-out line. Out of sixteen companies at disposal, two lie useless as skirmishers, and four are sacrificed to the principle of the opened-out line. The ten companies which remain at disposal advance in three closely following lines,—the two supporting companies of the two first battalions following next to the opened-out line at a distance of 30 paces. As the opened-out line halts to fire, the supports, if not made to step very short during the attack, would soon find themselves before it, which certainly could not have been the intention in the proposed form, and which can moreover be avoided by keeping them at a greater distance.

At a further distance of 100 paces, two companies from each battalion of the second line follow, thus four companies in one line, and the four remaining companies in the rear of these, at 50 paces distance.

Of the "considerable force which has been allowed to escape out of the hand of the Brigadier" one part (that is the two skirmishing companies) never comes into the decisive fight at all, and the other part without any guarantee for a successful working together.

The latter defect is caused by the great number of independently acting bodies. For it cannot be conceived that four companies formed into two lines in a space of from 400 paces broad to about 100 paces deep could be led and directed in an attack by the Brigadiers. They may have been

assured fifty times that, a "tactical unit" is that by which we reckon in tactics, and that (because divisional commanders reckon by "battalions") they form together a tactical unit. They would not believe it, or would forget it, if the companies were to be opened out in any way to the front for a considerable distance, which at least at the moment of the attack would prevent any leading by the field officer.

According to the proposition of the author, however, if we do not take into account the opened-out lines, which are naturally out of the calculation, ten separate companies move forward, whereby any leading on the part of the commander of the battalion is out of the question, and the right only is preserved to the commanders of regiments who are posted by the battalions of the second line, each according to the circumstances of the battle in front, either to send forward or to withhold these battalions.

The distance of the eight companies of the second battalions of both regiments formed in two lines, from the supporting companies immediately following these opened-out lines, is either too great or too small. It is too great if the task is put upon them of securing the success of the first line, or in any case of preventing an isolated falling back of the same, for they would arrive too late for this purpose; too small, on the other hand, if they are to be held ready for a second fight, even were it to occur soon after, as they would pre-

viously have suffered unnecessary loss. This last alternative the author appears not to have had in contemplation; but if we employ four battalions at the same time for an attack, it must be done in such a form as will answer the object of the greatest possible working together at the same time of all its force at the decisive moment.

It is not probable that this will last longer than half a minute, therefore the greatest distance between the front and rear divisions at the instant of the shock should not be much more than 50 paces.

This requires that the whole of the divisions following the opened-out lines should not have a greater distance than 120 paces from the first; for if the leading divisions, in consequence of the firing, were to lose about half a minute—equal to 60 or 70 paces—the rear division would only be 50 paces behind them at the moment of the shock.

According to this, it would be judicious to post the foremost supporting companies at the first drawing-up, at 120 paces in rear of the opened-out line, and allow them at the same time to take part in the attack, while the second battalions of both regiments, which have been kept further in the rear, before the advance of the opened-out line, should advance in close order up to the level of the foremost supporting companies.

It may be maintained against the last proposition that these battalions would suffer considerably more from the enemy's artillery fire than if they

advanced in the formation of our author—four company columns in two lines. This may be quite true so long as it is a question of an attack against a strong hostile artillery line; but, on the other hand, let us consider the affair to be a pitched battle of infantry masses, then we may well suppose that before advancing to the actual assault, the supporting fire of the enemy's artillery would have become deadened, and there would be only the fire of the hostile infantry—and that without doubt already shaken—to be considered. In the face of this, the close column of battalions is only a slightly more favourable mark than the four company columns; also in this, the right of throwing the two second battalions into company columns in the further course of the battle, somewhat before the entry into the *mêlée*, is nowise infringed. Only the choice of the time and the special form, remains reserved for the decision of the commanding officer, who will have to lead forward his battalion in close order, and keep it in hand as long as he considers proper.

The proposed form of the author, on the other hand, allows the individual judgment of every Captain much too soon, a latitude which almost excludes the battalion commanders from all participation in the command.

We therefore reject his whole form for the "ranged fight" of a brigade, and in the place of it, while keeping as nearly as possible within our regulations, we propose the following:—

The two regiments will be drawn up in two lines, one in rear of the other.

The brigades which are to enter into the battle line, that is within range of the artillery fire, after its battalions have been formed with full distances, and taken up a distance of 300 paces between the lines, will advance in deployed battalions. Should the ground offer any difficulties to this mode of advance, the several subdivisions may be thrown into file, which formation will be more suitable for taking advantage of the conditions of the ground, in order to neutralize the effects of the enemy's artillery. An exact keeping of intervals is not necessary, as battalion-volleys will not be suddenly required.

At about 1,000 paces from the hostile infantry position (the conditions of the ground and especially the possibility of cover, however, must be taken into account for judging of the proper time), the brigade will halt and form its first line for the fight.

This may be done most conformably to the purpose by pushing forward a front line of two companies from each battalion, while the other two companies, formed as half-battalions, follow at a distance of 150 paces. This form, besides, corresponds better than our present mode of sharp-shooting in battalions, to the truly correct principle, that the further supports of the first subdivisions of skirmishers thrown out, should be

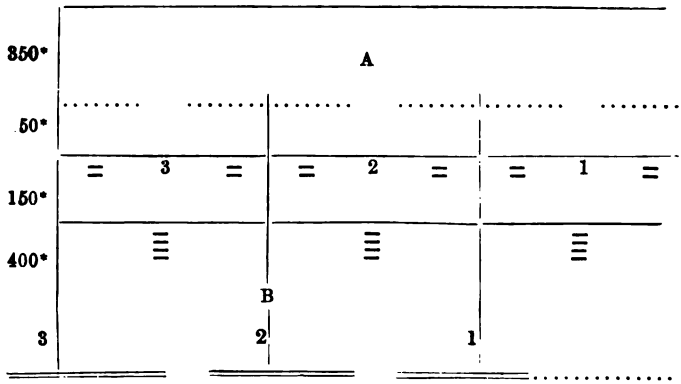
supplied from the companies to which they belong, rather than from other companies.

Whether the companies of the foremost line should now throw out skirmishing subdivisions to the front depends upon whether their front is clear of their own infantry; when this is not the case, the numerical strength and the essential bearing of the troops fighting in front, in every special case and on every point of the front line, must determine the measure of the immediate support which is required, and the necessity of a skirmishing formation for the foremost line.

If on the other hand the front is free, and as each company has a space of some 200 paces before it, a whole subdivision can be at once deployed, which being opened out at about 800 paces distance from the enemy, advances to about 350 paces in order to take up the first position. • The supports follow at 150 paces distance, and lie down there, or nearer if they can find cover on the ground. The half-battalions remain under similar conditions 500 paces from the *tirailleurs*, while the second line, still deployed, takes up a further distance of at least 400 paces, should the ground not offer it a nearer covered position, possibly also a formation in battalion-columns on the centre, might be allowed.

The position would then be as shown in the following diagram :—

Enemy's Formation.



A comparison between this and the other diagram of the ranged fight for the larger bodies of troops will show the following difference between the two :—

1. There, we find three lines formed of two battalions each, and here, two lines of three battalions each. The greater front development here, allows the same space to be occupied by two brigades, for which there, three brigades are necessary. The third line which is here wanting will be richly supplied by the third brigade, held back entirely out of the fight and at the free disposition of its common leaders, and hence forming a true reserve in a much higher sense than the six battalions belonging to six different regiments stationed in the third line.

2. A further comparison has only now to be extended to the four battalions formed in two lines of both forms.

There, we find in the first line two companies wholly deployed, while here, of four companies in the front line, each one subdivision; thus, in the whole, four subdivisions deployed instead of there, six subdivisions.

This difference is not important for the first opening of the fight. At all events the last proposed form permits of an immediate reinforcement of the line of skirmishers. All that is required is to deploy another section from each company; the same, provisionally held back, is, however, so far advantageous, as it will be necessary before undertaking the regular attack to advance the skirmisher fire nearer to the enemy, and also to support it. The breaking up of the whole line into four, instead of, as in the other form, two parts, renders the successive advances of the same more easy.

The formation of our author loses sight of this, as well as the further support of the *tirailleur* fire, while our proposition allows a skirmisher swarm of a strength double that of his to be employed.

If the conditions should exceptionally require it, the four fully deployed companies of the first line, of which each at the most has 200 paces of front development, will in every case, as well in standing fire as in the attack, do more than his two *tirailleur* companies with their rear, or according to circumstances front, four opened-out lines.

3. The formation which we have sketched provisionally, keeps the troops which are not

immediately required for the opening of the fight, viz. three quarters of the whole force, much further back than the author thinks necessary.

He draws up two battalions within the distance of about 500 paces (thus at efficient small-arm distance against larger bodies) from the enemy: that is, half of the offensive power of his first and second lines; while according to our plan, in the same sphere, only provisionally four companies (thus a quarter of the whole force) are to be found.

Within a further 200 paces he has drawn up his second line, which is then little over 700 paces distant from the enemy, and is thereby perhaps exposed from the commencement to the fire of good marksmen. Besides this, already at the beginning of the fight, the very small distance given to the lines leads to an apprehension that the enemy's bullets, which fly too high, would miss the troops of the first line and fall directly into the second.

Our proposition, on the contrary, places only two half-battalions at 650 paces, thus only half of the force within musketry range; while the other half, posted at over 1,000 paces from the enemy, is wholly out of the reach of musketry fire, and guards against the artillery fire by a form more suitable to the purpose.

It is clear that the brigade drawn up according to the proposition of our author will suffer loss during the introduction of the fight which might

be avoided; while the form proposed by us does not hinder the troops provisionally kept further in the rear, and more especially the regiment in the second line, from advancing near to the first line before the commencement of the serious attack. In order to carry out the attack, for which, according to our notion, the whole of the first and second lines should be employed, we propose the following form:—

After the skirmishers have arrived at about 200 paces from the enemy, and opened out a well sustained fire at that distance, and, according to the circumstances, after further reinforcements have deadened the skirmishing fire of the enemy, the brigade advances to the attack as follows:—

The regiment in the second line advances as soon as it has approached to within 50 paces of the half-battalions of the first line, these also advance with them, likewise at the command of the battalion leader. The companies composing the supports, which have been pushed forward as a front line, do the same as soon as the half-battalions have come up to the same level with them;* the skirmisher swarm at last get up also, and advance under a sustained independent file-firing, as soon as the supports and the half-battalions have approached to within 100 paces of them.

The closed divisions of the first line will then be

* If the companies fighting in the front line shall have been all exceptionally deployed, the throwing of the half-battalion of the first line into company columns will be requisite.

near the enemy, about 50 paces behind the skirmishers, which up to that time have masked them by an uninterrupted fire, and who are now destined to carry out the first attack, the last 30 paces of which at the double.

The half-battalions are to direct their efforts against points which are especially important: thus against closed divisions of the enemy which may be perceived. The smaller supports hold themselves in equal readiness to support the attack of the half-battalions, by taking any hostile divisions in flank which may be breaking through the front of the battle, as well as by affording direct assistance at particular points where the skirmishing swarms may possibly be wavering.

The second line follows the forward movement; the particular nature of the ground will determine whether it remains in line or is thrown into columns on the centre, or finally forms company columns in the line. But even in this latter formation the battalion leaders retain the immediate command over their battalions.

These are prepared, if requisite, to give immediate support to the front line, and this in most cases will have to be done at the point of the bayonet.

Should the Brigadier, who is stationed in front of the second line, judge it necessary, in the absence of any other reserve, not to allow a part of the second line to continue its advance in the movement of the attack, it appears that it would

be most suitable to keep back one battalion at such a distance as may be determined by the special nature of the ground.

Finally, the special formation which the battalions of the second line, following the first line at a distance of 50 paces should take, depends very much on particular circumstances. They should remain, as a principle, as long as possible under the immediate command of the officers commanding battalions, and are only thrown into company columns at the moment that they are required, when the direction of their point of attack can be pointed out to them. Possibly to employ two companies from those battalions as a half-battalion in close columns would be the most advantageous in the greater number of cases.

The above propositions are not intended to be understood as offering a certain means to obtain success; but these forms, which are not in contradiction to our present regulations, appear to be much more adapted to the object in view than those of the book now before us. An especial influence may accrue from the fact that, at the decisive moment of the serious attack, the commanders of battalions in their special functions (p. 91, P. I.) remain at the head of their battalions, relatively near the remaining (after sending away separate companies) half-battalions, whose further reduction appears so much the less to be desired, as thereby an important and visible nucleus

would be lost for the later assembling of the battalions.

Also the Brigadier and the commandants of regiments remain (during the advance of the closed divisions under the leading of commanders of battalions) with the small numbers which represent the main forces of the attack, and are in a position to exercise a corresponding influence.

A more suitable adaptation of the powers of our Generals and field officers is scarcely conceivable. Those, however, who have lost all faith in the functions of these officers, as our author appears to have done, would prefer an intermixture of all the companies, which would then serve for all possible and impossible forms.

CHAPTER XIV.

General characteristics of the attack and defensive fight in the future.

Our author, who cannot indeed altogether adhere to the view that the attack on a position occupied by troops having breech-loaders will in the future be impossible, expresses his opinion, in the course of a not altogether exhaustive examination of this subject, that one of the most important factors which will play a decisive *rôle* in the breech-loader fight is the artillery.

And after having cast a casual glance on the question of regimental guns, he says, "As to the relative effects of artillery in the attack and defence, the question cannot be here further entered into; but we may perhaps assume that the assailant by a just tactical employment of his artillery, might obtain a greater advantage from it than the defender, and so far as it offers itself as an element for paralyzing the defensive power of the small arm, the attacking party certainly has most benefit from it.

This hypothetical way of putting the case relieves the author from the onus of affording proofs in support of his views on a question which we hold to be of a very difficult character.

Involuntarily we recall to our mind a passage in "Tactical Retrospect," in which an inclination is shown to place the quintessence of the tactics of the future in the operation of the artillery, which affords a further proof of the intellectual relationship between that pamphlet and the one on "The Prussian Infantry." We there find (p. 41, "Tactical Retrospect,") "In the next war, that side will obtain an unconditional tactical preponderance which best knows how to make use of its artillery, or rather, that side which does not put off this practice till the moment that the war commences, that is, the side whose artillery has had the best tactical training."

Plainly this remark is only true *cæteris paribus*,

for is it to be supposed that that side would conquer which had the best artillery and the worst infantry? We scarcely believe that. What purpose then can such an assertion serve, which with equal justice might be applied to any other arm? The views which are loudly expressed from many quarters that the very strong front occasioned by the breech-loader would draw the attack more at present than formerly on the flank of the defender, our author holds to be only partially true. He grounds this restriction with regard to surrounding and flank attacks "that such manœuvres have their questionable side for the assailants," with which restriction, although we cannot fully agree, still we allow that it has its weight. And yet a leader who has decided on making an energetic attack would not easily give up the form for a flank attack; which latter has a double importance, a strategic and a tactical one.

The strategical importance has for its object generally the forcing of the enemy from his communications, which is plainly perfectly independent of the armament of the soldiers. It is the same with the breech-loader as with the muzzle-loader. The organization of the army, the duties of the commissariat and supports here come more into the question.

The tactical importance of the flank attack, on the other hand, besides threatening with the strategic consequences, which seldom fail to have

an effect on the *morale*, has ever consisted in the endeavour of the assailant to throw his force on the defender in a position more favourable to himself than to the latter. In the preceding century the whole plan of the enemy's formation was disordered by a sudden flank attack, and the strength of the assailant brought to bear on the weak part of the defender. Hence materially weaker armies were able to make use of this form of attack to advantage, so long as the defender, though much the stronger, had no time to make a change of front in good order.

In more modern times, the depth of the formation has taken away much of the importance of this movement. To endeavour to seek the more favourable conditions of the ground, which often occur on the flank of a strong frontal position, has taken the place of the flank attack. If, however, the ideas concerning the frontal strength of a position have become changed, still the essence of the same remains the same now as before, and even in a higher degree for the future; and herewith, also, the increased importance of the flank attack against a position occupied by troops with breech-loaders, in so far as the flanks or wings of the latter favour less the operation of the new arm.

We will now turn our attention to the proposed defensive fight of a brigade of our author. He now considers the brigade will only require two

lines, the whole strength being four battalions. Two battalions are told off for the direct frontal defence, and each forms a wing of 400 paces breadth. Each battalion deploys two companies in an opened-out line, and has the two other companies deployed at from 20 to 30 paces in the rear, in covered ground. The two battalions of the second line are posted on the wing which most favours an offensive attack. Our author will hardly oppose the view, that it would be much better, instead of the above form, to draw up the two regiments in two lines, one in rear of the other. That would be equally suitable for a brigade of six battalions.

It is amusing to see that our author can also fire volleys, and fall with the two battalions of the second line on an assailant who may possibly be advancing, in spite of the fire of the first line. Unfortunately the special formation of these two battalions, which, in any case, would require a united command, is not imparted to us. The opened-out lines would certainly not serve him; may we, therefore, presume that the totally rejected columns would come into play?

Our proposition for a fight of this nature contains forms perfectly analogous to the offensive fight which we have minutely described, viz. a front line strong in skirmishers and small supports; near to them in the rear, half-battalions, and at a short distance further back, two lines. On the

defence we can choose our own ground, and thus keep our force under cover, and hold it well together. At the moment that the enemy's attack is well declared, according to circumstances, the whole of the first line would be employed for the fire-fight, and the counter-shock may be undertaken by the second line, brought up in close proximity with the first line. The second line should not be allowed to follow up the shock by an immediate pursuit. This will be done under fire, if possible, in connection with cavalry, which should be at hand, and which must charge home, sabre in hand.

CONCLUSION BY THE TRANSLATOR.

It is not my intention to translate the fifteenth chapter, as it has nothing to do with tactical forms, and is conceived in a spirit of bitterness against the author of the two pamphlets which have been under consideration.

Fault has been found with him on account of his remarks concerning personal considerations; and with regard to what Colonel Schellendorf says, that such reflect upon the *Königliche Abtheilung für die persönlichen Angelegenheiten*, I would just remark that appointments for personal considerations by those in power, without regard to character or

fitness, has been the ruling vice of all countries and times.

We also have a "royal department for personal affairs," although it has not that official name, and well would it be for us if there was no favouritism in it; but royalty has no more to do with favouritism than any other power. We have only to look at the United States, or England when a republic, to see the truth of this. There was no greater jobber in the matter of appointments than Oliver Cromwell; we see that nearly all his officers in the higher ranks were family or other connections.

Appointments, then, on considerations of personal favour, may be said to belong to psychological causes, which probably will never change. The only way, therefore, to prevent the immeasurable evil which has accrued to armies from this terrible abuse of power is to restrict it, and, if possible, prevent its being exercised by any one man.

Our own history furnishes many examples, both civil and military, in which the most important public interests have been sacrificed to personal considerations. The Archduke Albert has, in the strongest terms, denounced the practice in Austria; and the author of "Tactical Restrospect," instead of meriting blame, on the contrary deserves to be honoured as a public benefactor for having brought so crying an evil into prominent notice.

Again, he has been blamed for attacking field officers as a body, and for saying they were "*mürbe*," they had the rheumatism, and children, &c. (p. 15, "Tactical Retrospect.") Now I cannot, in the passage in question, see any imputation against those officers to merit so severe a reproof as is contained in the following passage:—"We beg to remind the author of 'Tactical Retrospect,' that if he has no scruples in injuring the reputation of the living, he should at least have respected the memory of the dead." No doubt the author reasoned like a very young man, who generally looks on a man of fifty as old; and, indeed, as a rule, officers under that age are certainly more capable of performing the active duties which are required in a battalion.

The practice of placing an old officer in command from personal considerations, and then giving him a talented staff to make up for his deficiencies, is also most justly held up to reprobation in the pamphlet of Archduke Albert on "Responsibility in War," and that this practice has constantly been pursued in England is one of the greatest blots in our military administration. The compulsory retirement of old officers should be made one of the principal conditions in our reorganization.

In conclusion, I feel convinced that the halo of glory which now surrounds the whole of the Prussian officers, both old and young, will incline them

and the author of this reply to bury all resentment in the grave of our Captain, who has died in his stirrups right gallantly, and has shown, in this at least, that his heart was indeed true *den alten preussischen Traditionen.*

H. A. OUVRY.

January 16*th*, 1871.

AUTHORISED TRANSLATION.

(Second Edition.)

THE

Prussian Campaign

OF

1866.

A TACTICAL RETROSPECT.

by Captain May, 44th. Regt. of Infantry.

Translated from the German,

BY

COL. H. A. OUVRY, C.B.

(LATE 9TH LANCERS.)

Ars enim bellandi, si non præluditur, cum necessaria fuerit non habetur. Animos subito ad arma non erigunt, nisi qui se ad ipsa idoneos, præmissa exercitatione, confidunt.—CASSIOD.

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TRANSLATOR'S PREFACE.

A FEW weeks ago the anonymous German pamphlet, entitled, "Tacktische Rückblicke auf 1866" fell into the hands of the translator.

Its intrinsic merits appeared so extraordinary, and the matter treated of so important, that he thought it might be beneficial to our own officers if it were put in a form accessible to those not conversant with the German language.

It treats of the war experiences of the Prussians in 1866, and is written in a truthful and courageous vein, the author speaking out very plainly, and never seeking to hide the shortcomings of his countrymen.

Some however may think that all treatises on the science and art of war are now superfluous, since we learn from the sayings of certain wise men, that we are to have no more wars, and that we are to live for the future in one gigantic, virtuous republic.

This is the opinion of M. Victor Hugo; and M. Thiers says, "Have as little to do as possible with your neighbour; keep aloof from him; thus you will not be able to make war." Again, M. Jules Simon lays down the law thus: "All join with me in demanding liberty, and with it, its

indispensable element, peace; when nations shall become rivals in industry, instead of enemies in arms, try to make war if you can.* I defy you to the attempt—upon this freedom of work and commerce, the future of universal liberty is destined to be based, and war shall be no more." (*Loud cheering.*)

This may be all very fine, and no doubt these gentlemen have a right to their opinions; we, however, who know human nature a little better, will leave them to their Utopian visions; for whatever they may say, and however much they may preach, while we are constituted as we are, war will ever be the history of mankind.

In addition to the very instructive tactical considerations which are discussed in this pamphlet, there is one point of most momentous import to us in England at the present time: I mean the example of Prussia.

Humbled to the dust, bleeding at every pore in 1807, and reduced to a third-rate Power at the peace of Tilsit, Prussia determined to make a noble effort at regeneration which would enable it once more to take its position among the leading nations of the world.

It began by breaking the tyrannical fetters of feudalism; it cast off the mediæval incubus, restored the people to their rights, and thus by the infusion of new blood—the blood of free men into the nation—restored its vigour.

* Try to make war if you can! ! ! Nov. 2nd, 1870. What about the bombardment of Paris? H. A. O.

In spite of the violent opposition of the privileged classes, the nation quietly and sternly pursued its course. Years flew by, and at last its efforts were crowned with success, and it reaped a glorious reward in the Campaigns of 1866.

If, instead of restoring the people to their rights according to the advice of "le nommé Stein,"* the ruling power had kept to the old feudal system; the Prussian musketeer, now a great fact, would have been impossible, because the material would have been wanting.

Let any one contrast the miserable state of Prussia immediately after the peace of Tilsit, with its apparition as a first-rate Power in 1866.

The object of the present treatise is to examine the glorious Campaign of 1866, in which the breech-loader, a new element of warfare, was for the first time introduced.

To give an idea of the power of this new instrument, it is only necessary to cite one example—the repulse of the Austrian attack in column at Chlum.

The column, 20,000 strong, advanced in the most perfect order to the attack. In twenty minutes, under the fire of the Prussian breech-loader, it lost 279 officers, 10,000 men, and 23 guns!

Now as no troops, however good, can possibly stand under such a fire as this, the grand question is, what we should do in England, in order to meet this new condition of warfare.

---

* Napoleon ordered "le nommé Stein" to be arrested and sent out of Prussia.

Perhaps the study of this pamphlet may give us some aid in arriving at a conclusion, and should that be the case, we shall be much indebted to its author, and the work of the translator will not have been in vain.

HENRY AIMÉ OUVRY,
Colonel,
(Late 9th Lancers.)

2, Bryanston Street, Portman Square,
15th January, 1870.

PREFACE TO SECOND EDITION.

THE translator little thought that the questions mooted in this pamphlet would be so soon put to the test when he issued it in January last; he begs to refer his readers to Chapter VII. "In the next war that side will gain an unconditional, tactical preponderance, which best knows how to make use of its artillery, or rather that side which does not put off this practice till the moment of the commencement of the war, that is, the side whose artillery has had the best tactical training." There is a great deal of talk about Army reform now-a-days, but what we want immediately is Artillery, the rest can wait.

H. A. OUVRY.

2, Bryanston Street, Portman Square,
Oct. 18th, 1870.

(Authorised Translation.)

TACTICAL RETROSPECT OF A.D. 1866.

CHAPTER I.

INTRODUCTION.

THE flood of pamphlets which have been published concerning tactical relations, since 1866, is already very significant. Should another now be added to the list, the author may allege that he takes that course because, in his opinion, none of those which have preceded him have made even a commencement towards a clear understanding of the rich experiences of 1866. Since all the wisdom of the system-mongers has been put an end to at one blow by hard facts, we should naturally expect to see any observations supported and grounded on the actual events. Between the description of a battle as it really is, or as a creative genius may please to represent it, there is indeed an immeasurable difference. Before the last campaigns, men were obliged to form strategical conclusions at second hand. The official accounts of military transactions from 1813-15, coloured by the distorting medium of many years, corresponded very little with the reality. These, assisted by the fantastical French accounts, formed the only materials to fill up a war picture, except perhaps, a little aid drawn from the illusions and

speculations of peace-time. Now, however, we have seen—seen with our own bodily eyes—the reality; and from this time forth, no one, however high his intellectual gifts, will be justified in judging concerning the "how" of the battle, or the tactics pursued, unless he should himself have witnessed this "how." He who has not been favoured by fortune in being permitted to take a part in these events may rail at his destiny, but he certainly can have no right or pretence to give an independent tactical judgment. The unnatural craving to judge of a world in which we have never lived, revenges itself immediately; for we see at the first glance that the numerous essays, the substance of which the author often makes unfortunate attempts to bolster up on his own authority, are of his own making, and of no value whatever.

Unfortunate in a like manner, also, appear to be the endeavours, now that the fresh life of experience is before our eyes, to attain to practical results by constructive philosophical reasoning from man's nature. However cleverly and logically we may try to develop the one out of the other, and finally to arrive at irrefragable conclusions by such reasoning, still, between a man thus constructed according to rule, and a Prussian musketeer, there will always be a wide difference. In order to form a correct judgment, it is necessary to have seen the man. All such philosophical deductions can have little value; they may possibly bear fruit for science and after ages, but are of

little use for the present time, or for practical guidance.

We therefore take our stand here in the regions of real life and experience, but are far from believing that on that account alone we shall be enabled to produce anything of greater value than our above-mentioned predecessors. In the results which so quickly follow stirring events it is not easy to pick out the useful points. It is, perhaps, even more difficult than to speculate theoretically, seeing that real life leads as easily to error as to enlightenment. But, taking the view that it is our duty to publish the results of what we believe to be true, so that all may profit by it, we proceed; for even if our conclusions should be rejected by the tribunal of public opinion, scarcely anything will have been lost. All things will proceed in the path of progress, and we alone shall remain to be pitied, inasmuch as we shall have failed in our hopes of benefiting the community, and our vanity will suffer from the failure; but a straightforward honesty of intention will soon live that down (*verschmerzen*).

We are far from desiring, in the following pages, to introduce any startling novelties; such is not our object. If what we have to say be correct, many others must also at the same time have discerned and recognised it. However generally and contemporaneously the conviction may prevail of the necessity of a tactical reform, it must be very apparent that all such innovations, before they are reduced to rule, must undergo a long course of

probation by all descriptions of troops; must be introduced, then prohibited, and again re-introduced. This course will naturally prevail before judicious conclusions can be arrived at. With us Prussians the problem will be solved by the experiences of the late campaign, without any exterior aid. If then, these experiences are acknowledged to be sound, they must have an influence on the time and mode of carrying through the reforms in question. The experiences also of 1792-95 caused improvements in this direction, although at the expense of a very bitter lesson. It is the task of theory to anticipate and lend a hand in the development of these reforms. It can collect that which is loose and straggling, direct observation to the weightiest points, and excite discussion. The author, as well as the critic of any treatise on the subject, however honestly it may be written (and on that account above any petty vanity) feels that there can be no other criticism for it than the result. If the points treated on should be verified in the course of time, when a war may break out, or during its continuance, then the treatise is justified. If this should not be the case, it is condemned. A criticism which frequently allows itself to be blinded by mere finely-turned periods, and a critic who has not witnessed what is here spoken of, cannot judge of it.

One condition however is indispensable, if we are to be of any service: we must have the courage of truth; we must represent things as they are, and not hide them under the meretricious cloak of

a lying, so-called patriotic sentiment, concealing, praising, and euphemising, deceiving ourselves and others. We are men, and have fought manfully, so also have we erred: but we are sufficiently strong to hear the truth.

If hereafter we enunciate views or make propositions, it does not follow that they will be of general application; they are rather, purely founded on the state of the Prussian army, and what happened to it in the year 1866. They will have been elicited, not by the arm, but by the bearer of it.

CHAPTER II.

When we reflect on the battles of 1866 in order to consider them from a general point of view, we observe throughout one pervading phenomenon; that is, a most extraordinary extension of front with a very small degree of depth. The whole force appears extended in long thin lines, or separated into individual bodies fighting independently; above all, appears an inclination to surround the enemy by means of long extensions of the wings; and in this the preservation of the original "*ordre de bataille*" is quite out of the question. The different divisions of the army mix themselves up, or become mixed together, sometimes in the course of the battle, and sometimes before it becomes general. The several

bodies of troops are formed on principles of the most different kinds; in action almost always in company-columns, sometimes however in half battalions. The tactics of these company columns consist in throwing out swarms of skirmishers, their supports from time to time resolving themselves into the same; the whole of the front line now bears some likeness to the confused attack of a horde of irregular cavalry, the impulse of each individual leader carrying with him that which he finds at his side. The second line of the army, which was in the rear, strives to come up as quickly as possible to the front, in order to take part in the battle, and also because a considerable portion of the shot and shell intended for the first line passes over its head and falls into their ranks. But these in their close columns cannot so easily find cover on the field, and are obliged to bide their time, and by such delay become exposed to the feverish suspense which is unavoidable when troops are kept long under fire, and thus prevented from forgetting the danger, in the excitement of the struggle.

No wonder then, that officers and men eagerly seize on the first opportunity that offers, and make it a plea for pressing forward to the first line; the separate divisions push in whenever they can find room. By preference they incline towards the flanks, for there they can find the least impediment to their advance. Very often no reserve at all remains, or that which remains in the rear is too weak to answer the purposes of one.

It would be a great mistake to put into the category of errors, without any reservation, these individual and apparently irregular proceedings. Seeing that we have here to do with new phenomena, consequent on new conditions, these must be enquired into, and that which is found right and lawful in them acknowledged.

When the needle gun, at the commencement of the fifth year of its existence, was first generally issued to the troops, it was a standing order, insisted on by Generals who preached at all inspections and parades, "Gentlemen, throw out very few skirmishers—only one section, that is now as efficient as an old subdivision, let all the rest be kept well in hand." Experience, however, soon showed that the exact reverse of these theoretical rules, which appeared so judicious at the time, was the right practice. Above all things, every one sought to give full effect to the efficiency of his trustworthy arm. Why should they be held back? Why not strike with the full weight of the weapon in their possession? Thus they all dissolved themselves into a swarm of skirmishers, because in that formation the breech-loader can be best used, and was besides sufficiently analogous to a company column, which often stood more than ten deep, and fired from all possible positions. And this would take place, not so much at the word of command of their leader, who perhaps could only hear himself from the deafening noise of the guns and small arms, as from a natural consequence of the circumstances in which they were placed. We

may now cast aside the imagination that the leader stands in the chivalric position laid down in the regulations for reviews and inspections, "one pace in front of the firing party to windward, in order calmly to direct the fire, to indicate the object to aim at, and to fix on the proper moment after a volley, at the command 'battalion march,' to rush on to the attack." This is a pretty "peace-time" picture, necessary for the purpose of training and instruction; even the apparently novel irregularity above alluded to must finally be reduced to fixed rules, otherwise exercises and instruction will be impossible.

The leader in battle, even the coolest and bravest, will be enabled, under cover of a tree or earth-work, with his glass at his eye, to superintend operations under fire much more carefully; a useless exposure of his person would be a mere act of vain bravado; an officer commanding troops has something better to do than to throw away his life to no purpose. A particular reason can alone justify his exposure to fire; such as, for the encouragement of his men, should they show an inclination to hang back, when he may place himself outside cover with assumed indifference; or if it should be the first time of his being under fire, he might expose himself for some minutes, in order to ascertain the effect of the whizzing of the shot on his nervous system. His essential influence under these circumstances is bounded by some such short word of command as "Battalion take ground to the right 500 paces," if he should

observe a better position; or if he should consider the moment favourable for an attack, he will simply say "now, forward, march, hurrah!" and then rush on. If the troops are lying down, they arise just as they are; perhaps some of the men, becoming wild, think it their duty to commence firing in the direction of the enemy, their bullets whiz past the ears of their commander, who is in front, and then the whole rout (*tross*) rush after him to the attack. Some there are, who are of opinion that discretion is the better part of valour, and that it is better not to throw dirty water away till they have got clean; such hold back till those who have gone before have carried the position, when they follow with loud shouts on their traces.

This confused and irregular mode of attack should not be condemned as faulty; on the contrary, it is a necessary result of the new arm, and the peculiar training of the men. The great and zealous care with which from year to year we mark, verify, and note down each shot at musketry instruction, and the virtuous indignation with which every miss is put to the wrong side of the account by the instructor, becomes paid with interest. We should bring as many men as possible into the condition of being able to use their arm according to their own judgment.

This mode of fighting has an invariable result; the original depth of the order of battle, which consisted of a support behind the skirmishers, and a reserve behind these, is now superseded by a greater extension of the front line.

The far and sure-carrying arms of precision of the present time forbid supports and reserves in closed columns, except where the ground is favourable for such formations. It is apparent that either the old secondary formations have become impossible on account of the greater range of the missiles, which occasions the distance to become so much increased that there can finally be no relation between the supports and the engaged line; or the supports see in the loose, opened-out formation the proper means to adopt, and thus, of their own accord, they rush up at the double into the first line. With regard to this point of view it would be well to study all the battles of 1866; it will be found that nearly all the companies of the second line soon forced themselves to the front. The mass of companies forces the line to extend laterally, as every newly-arriving body has a tendency to join itself on at the wings.

In this striving of the supports and reserves to force themselves forward into the fighting line lies the impossibility of preserving the old-fashioned order of battle, or even the primitive tactical formation.

Every division in the rear which has hitherto remained in close column rushes in where necessity or a possibility shows itself. An interchange between the engaged line and its supports is evidently impossible; there is not even the smallest guarantee that a company will fight together with the skirmishers which it has itself thrown out, or that the companies of a battalion, or the battalions

of a regiment, will ever come together. Let any one compare the state of every single battle of 1866, with regard to the positions of every division of the army after the troops had been well engaged, and the old-fashioned order of battle. It would however be very rash to conclude that all this was a great series of error; far better would it be to ascertain how far these new phenomena are legitimate and reasonable.

The mounted officers are obliged to dismount, which makes the supervision and direction impossible, which is so easy in peace-time manœuvres. Frequently the dismounted staff officer, somewhat unaccustomed to quick marching over stock and stone, is scarcely able to keep up with his battalion; thus the breaking up into columns of companies is for him a solution of his difficulty. He thinks that certainly the four officers commanding the companies will know what to do, so he attaches himself to a company. The original officers of lines are in the same predicament; their lines are broken up and scattered in all parts of the battle; thus they are obliged to give up all idea of commanding them, and attach themselves to the first company of infantry that offers, and, in order to do something, command that. It thus happens that some companies, favoured by chance, have besides their own captain, a major, a colonel, and a general as well; the company will not perhaps be better commanded, but those officers will at least have done all that remained in their power. They are all in

the front line, and by their personal example influence those among whom they have placed themselves, but in fact they have become mere captains of companies; the whole line of battle has thus become nothing more than a fight between a number of company leaders and the opposing enemy.

This manner of exclusively fighting by columns of companies, and their employment on all occasions, is a momentum which has peculiarly developed itself in the Prussian army. For this reason our (Prussian) captains are relatively the most precious portion of the whole army.

Our company leaders are, on an average, from 30 to 40 years old, an age in which the body is obedient to all the demands of the spirit; and this spirit, after it has conquered all the immaturity of youth, still possesses sufficient elasticity to work both actively as well as zealously. The high sense of duty, and the perfect knowledge of all the forms of the service, which have not yet struck root in the immature minds of the younger officers, necessarily affords the company leader the opportunity of possessing the first requisite in warlike events, viz. the fullest command over all his subordinates. The constant petty annoyances of peace-service have not yet disgusted him, and rendered him listless (*mürbe*). A campaign still appears to him an end of the annoyance of being obliged to look after and keep in order the equipments of the fourth part of a battalion, and the every-day details of the service. He sees a future still before

him, and ambition—that grand lever in all warlike affairs—is still lively in him. The faint-hearted man will be carried away, and hurried forward by his active comrade who fights by his side. Thus, the company leader sets an example which cannot be surpassed. Should he fall, the senior lieutenant steps into his place; he has long waited with eagerness for the moment when, with no one above him, he will have nothing to attend to but the enemy.

Many a fight is thus won by the company leaders. The preference, however, here given to one rank is not intended as a reproach to the rest. We are all men, and act according to nature. Youth is always bold, reckless, thinking only of the present moment; age, on the contrary is prudent and egotistical; it is only in exceptional dispositions that these two advantages are developed in the same individual. These are the few who govern the world, and are honoured as heroes by this our age and by posterity. The same company leader who, at thirty years of age, distinguished himself at the head of his company, at forty becomes a staff officer;* but ten years of grinding service, including continual inspections, corrodes his freshness, unless he is endowed by nature with an iron constitution. He has now become listless; he has got children and the rheumatism; the bold, active spirit has fled; he is therefore no longer fitted to show a personal

* A Prussian staff officer = an English field officer.

example in his position to those about him. Requirements will be made which his calm judgment will often not approve of. He begins to reckon up the amount of his pension, and to consider whether his conduct has been such as will recommend him for further promotion, or whether, with a possible failure in prospect, it would not be better for him to get out of the way in time. He looks on war without any illusions. The wet bivouac, the never-ending hardships, the not being able the day after the battle even to hunt up more than one cigar in the midst of a quarter of a million of men, are most lively reminiscences with him. He becomes contented with his present condition and looks for nothing more in the future. Should he go again into the field, he is led there by honour and duty, not by ambition. Ambition inspires individuals to wish to do more than others—more than is or can be ordered. Honour bids him do his duty. It is, however, only the ambitious officer who does that which is uncommon, that is to say, who achieves greatness; and let it be reiterated that it is of great moment to preserve ambition and a fresh elasticity of spirit up to old age.

It is only an iron nature which can bear up against gnawing cares, and by a self-dependent faith still preserve its belief in a future. It is, however, impossible to apply this ideal rule to the generality of men. These listless characters have, for the most part, put themselves out of the way of becoming Generals. Those who still continue to

serve are men who, from external circumstances, have passed through the several ranks easily, and who bring to the office of General the whole of their mental powers, unweakened as they have received them from nature, or else they are of the sort that have had reliance in themselves and made their own way. These last are those who possess united the impulse of youth and capability to see things from an enlarged point of view. On them rests the hope of the army.

It is then naturally indicated that we should bring up our companies independently against the enemy, in order to utilize the full powers of our army. As many company leaders as there are in the fighting line of battle, so many individual wills are there which we may rely on are filled with the one idea of acting against the enemy with the greatest vigour, and which possess most perfectly the means of carrying their ideas into execution.

The material of our (Prussian) men favours these tactics in a high degree. The North German soldier is generally somewhat dull and quiet, of sound though not great natural intellect, and without personal ambition. Fair words have no effect on him; there is only one thing that makes any impression, that is—the deed (*die That*). When he finds himself suddenly encompassed by the dangers of war, he desires to have some one at hand to give him confidence that all is going on well. His eye naturally turns to his officer. If he sees in the calm look of his commander that he must be obeyed here the same as in peace-time,

if he sees him go forward undismayed, he generally asks for nothing more. An example pleases, inspires, and overawes him. He has an admirable quality, which only wants to be developed, and that is, the desire heartily to admire some one; and he blindly follows his leader with unbounded attachment to his person.

The best foundation for the authority of an officer over his subordinates lies in attaching them to himself personally by his actions, without seeking it, perhaps even while seeming to avoid it.

True attachment to the person of his officer, far more than ambition and patriotism, is generally the motive which inspires the soldier to the utmost. If he should have overcome the first novelty of the situation, and have got confidence in himself, all his good qualities may be developed to the full extent. His naturally quiet disposition does not induce him to rush on impetuously, but rather to go thoroughly to work. Like a true German, who always clings with a religious tenacity to his property, he now concentrates all his affection on his weapon, which gave him in peace-time many a weary hour. So long as the danger is indefinite, he feels himself uncomfortable; but when he sees it before him he soon collects himself: and when at last he stands face to face with the enemy, he remembers with a certain satisfaction many a Sunday affray, and considers that he is now bound to improve the occasion, which this time certainly will not bring his name into the defaulters' book.

We (Prussians) can, without too much risk, venture on a greater division and intermixture of our companies. In most cases the soldier, if he has once formed an attachment to the person of his officer, will take pains to find him again; and thus we are enabled to permit of his fighting separately with confidence. On an average our (Prussian) soldier compared with the soldiers of other continental armies, is of a physical strength which instils a certain confidence.

The reverse of the character of our soldiers, which consists in a want of personal ambition, and the necessity for the immediate supervision of his officer, will be reserved for a later consideration.

Should foreign armies think of imitating our company-column fights, they must take into consideration how it stands with them with regard to the fundamental principle; that is, the relations between their officers and men. They will otherwise adopt the disadvantages without gaining the benefit.

There lies also in the great defensive power of our arm, an element which renders these narrow irregular lines more capable of resistance than is apparent at a first view. They will always be able to repulse feeble attacks; even the smallest detachments will not allow themselves to be ridden over without ceremony.

It must be most distinctly understood, that these loose irregular formations, which we have here alluded to are not to hold good on all occasions and in all circumstances. So long as an officer

believes himself to be in a position to gain the same results by keeping to the systematic forms of the service, he is quite right to do so, but let him recollect that one atom too much of this is pernicious. Let officers look to the spirit of these apparently irregular formations, and not allow themselves to be taken by surprise or be disconcerted should they manifest themselves. An army which cannot venture to trust in the individual worth of its soldiers, so far as to let them fight in this manner, cannot reckon on the advantages to be derived from the operation of the breech-loader.

CHAPTER III.

In the foregoing chapters we have sought to lay down how the loose and apparently irregular formation of our fighting line is a necessary consequence of the peculiarity of our army, and that it is attended with very beneficial results. It must, however, never be forgotten, that here, where the strength of our army lies, is also to be found its most sensible weakness. The more the different parts of the army have a disposition to fight separately, the greater will be the strength of hand required to hold them together, and arrange matters so that all their unchained power, instead of following their own ideas eccentrically and without plan, shall finally work towards a point fixed upon by the eye of their commander. A mere mechanical leading will produce no result, because the leader would then not understand how to use his precious

instrument; a faulty leading is still worse, for it would ruin it.

This loose individual mode of combatting requires a counterpoise which must be twofold. The first and most important is the Commander-in-Chief, who remains on horseback out of the range of fire; he watches over, and has by him a strong reserve to reinforce the front line when necessary. The other counterpoise is the officer commanding the front line, whose essential duty it is to execute all necessary movements in the same.

We will speak now of this latter point. The greatest danger to this line is, that the enemy, by an attacking force concentrated on one point, and suddenly applied, may break it, and drive back these small individual divisions which are fighting without any plan. Trautenau and Langensalza afford proof of this.

The fighting line cannot always receive benefit from a reserve which stands intact in the rear; the blow comes so suddenly that the reserve hurrying up to its support, only comes partially into the fight, and is wholly enveloped in the mass of the retiring line. This being so, the fighting line should seek a resource in itself, to resist such an attack effectually.

For this purpose it is necessary that the superior officer in the front line should form into close columns all who are not actually required as skirmishers, and place them in such positions as may appear good to him according to the nature of the ground, and where they will be most useful, without any

regard as to whether they happen to be before or behind the line of fire. But in these formations all idea of the original ones, whether of companies or battalions, should be laid aside. There are often on one spot hundreds of men, of all sorts of troops, mixed up together. Instead of forming a half battalion in close columns of these, without reference to their original belongings, why should recourse be had to a formation of a number of small troops and trooplets (*Trüpchen*) according to their original belongings, which would have no effectual power of resistance, and which would, for the most part, dissolve again in a moment?

Our (Prussian) army has an advantage which cannot be too much appreciated, in the general uniformity of its component parts. There is no reason why a body thus formed provisionally from men belonging to different regiments, should be at all inferior to one formed regularly according to their original tellings off; this is an advantage which must be utilized. If it can possibly be done without disadvantage, certainly the original connection of the formation of the troops must be preserved. A first aid towards this is the formation of an order of battle conformable to the purpose, that is, to send in the same direction all the men of the same corps; thus, at least, their intermixture is only possible to a certain degree.

Up to this time we have held the peace-time view that a regiment was not a tactical, but merely an administrative unity; tactical unities being

battalions and brigades. The campaign, however, soon taught us a different lesson. Whoever has had a number on his shoulder will know the importance of a man coming in astray from his division seeing the number of his regiment on a shoulder-strap, even if it should be that of a dead man; he is like one who, after long wanderings, suddenly finds that he has returned and found his home.

There should be no great difference in uniform. When a man passes a regiment, his eye involuntarily turns to the little mark on his shoulder; he sees nothing but that. Regiments are especially the most marked tactical unities. If we would, in the necessary intermingling of a fight, collect and re-assemble the troops in the easiest manner possible, the different regiments must be kept together. When a regiment goes entire into action, not only is the ambition of the individual active, but also that of the whole regiment which fights for its history.

The homogeneity of a regiment* does not suffer from the mixing together of the most different elements, if they are all of the same value. But for this reason it is necessary to make no difference between Fusilier battalions and others. The very small advantage that can ever accrue from having any kinds of picked battalions, is far outweighed by the very grave disadvantage of having in our army some battalions that are worse than others. In the equality of all parts of our army, and of all

* 4 companies = 1 battalion; 3 battalions = 1 regiment.

its officers, lies its most powerful impulse, its strength, and its essential superiority over all other armies. The idea that these picked battalions are intended for a particular service may be dismissed as an illusion. A battle is capable, at any moment, of assuming all kinds of phases, consequently an infantry is required which can be used in all cases.

If the superior officer, who commands the first line, wishes to fulfil his duty properly in his sphere of action, he must direct the whole chaos of the surrounding fight. But, in this chaos, parts of the troops originally under his command become mixed up in the most varied manner with others. If he should only command his own part, the force of the rest would not be utilized. No officer would willingly encroach on the rights of another leader, but it is most especially necessary that every leader should have the right, unconditionally, to dispose of all the troops that happen to be in his vicinity. The senior officer commands, and posts the companies or the battalions together, according to his judgment. He assembles together, in strong masses, all that are within his reach at the spot where he foresees an attack, after which the columns can be deployed, and again resume the offensive.

Thus a strong resource is always to be found in the front line, weak as it may appear to be, if there should be a leader at the decisive point who knows how to command, and thinks of nothing but the tactical emergency.

But it may be objected that such tactics would make it very difficult, after the battle, to re-assemble the troops thus mingled together, in their proper corps and divisions. To this we may reply, consider the case of the battle of Charbusitz, where three different armies had mutually to pick out their own men.

And, again, it may be remarked—first gain your battle, that is the chief point, then it will be far easier to disentangle and collect your men into their proper places, than after it is lost. If, therefore, the victory can be gained by this free disposal of men of different corps and divisions, it can not only be justified, but should be enjoined.

Further, it may possibly be objected that collisions will, under such circumstances, unavoidably occur between the several leaders of corps and divisions. To this it may be answered, that most certainly such a disposal of men *à discrétion*, is only possible when the officers of all ranks, without exception, are educated in the highest degree, both in an intellectual and military point of view, and are in a position to rely on their own tact for the solution of difficult and weighty points, rather than on any prescribed scheme of tactics.

One single individual who is destitute of the above qualifications, has the power of causing the most ruinous consequences, which is a fresh proof of the great advantages to be gained by having all officers formed on one principle.

This formation of scattered elements in a moment must become one of the most precious

movements to employ in every battle, but the right moment must be seized, as the opportunity, not being taken advantage of, may never return.

This absolute right of disposal of men of other corps and troops, may be regarded from another and most important point of view, and that is, the nature of our soldiers, which we must here again take into consideration.

He who considers that our men are all heroes because they are derived from a brave class is very considerably mistaken. If only all soldiers, of their own accord, would simply do their duty in battle, an army would be perfectly invincible, and would not require any tactical instruction whatever.

But man has in his composition a natural desire of self-preservation, an egotism and indolence united with many sensual desires, but at the same time also germs, which are capable of being developed into higher qualities. He who has come to a consciousness of this, not only knows it, he breathes and feels with his whole soul that there are spiritual powers of a higher nature, which stand opposed to the sensual bias, and that he must combat this with all his might; it, however, cannot be done without a struggle. Who would ever maintain that death was indifferent to him? for in the tumult of the battle danger is not so much despised as forgotten or ignored. The less the powers of the mind have attained to this freedom of development of the spiritual powers, so much the

more will the senses hold sway. The man of the people who is accustomed to rough or dangerous work has rather deadened this sense by custom, than conquered it.

The greater number of the men go bravely into the fight because their common sense tells them that it must be so, that it would be shameful to sneak off; if they cannot do so with a good grace, they make the best of a bad bargain.

So long as the soldier knows that the eye of his officer is upon him, he instinctively feels the inspiration and willingly bows to it. But in the supreme moment, in which danger and death are imminent, suddenly this accustomed link is broken, the eye of his leader is directed towards the enemy in the front, the troops hurry towards the fire and among the hissing cannon shot; the man sees death in his front, and a nice road-side ditch by his side; it is the temptation to a theft, he sneaks quickly into it, and his company is soon far away from him. Those who immediately follow take him for a wounded man. Presently he stands up, he has become a "straggler;" no one interrogates him, the only one who has a right to do so is in front. Perhaps he now seeks to make himself useful, in a safe place, by helping to get the wounded or prisoners to the rear, or he turns simply to marauding. Opportunity makes the thief.

This sneaking off in all kinds of ways is by no means a rare occurrence. It is chiefly by these kinds of stragglers that such a serious melting

away of many companies in battle is caused. The next morning, when the hot coffee appears, by a most remarkable instinct, they all happen to have found their places again. The same man, who, while overlooked, bears himself bravely, will fall off when left to himself. And let us here be very frank. Is not this phenomenon so very natural to man, that in a modified manner it prevails universally? The officer who feels that the eye of a General whom he fears is upon him does wonders; but if the same officer should be isolated and left to himself, the strained nerves slacken, all the bodily and mental instincts reassume their empire, and thus he does his duty and nothing more. Why are leaders immediately blamed if whole bodies of troops do not behave well? Because every one feels that troops never behave ill so long as there is a ruling spirit to inspire them.

From this then we may conclude that the watching over troops is a necessity. It is not sufficient that the eye of the leader is directed to the enemy; to advance and leave half the men behind on the way cannot lead to any advantage. The company should have an officer in the supernumerary rank, who should be responsible on his honour that he will keep there, and not rush to seek his laurels in the front. Then it will be easy to bring the company full and complete into action.

CHAPTER IV.

In order practically to carry out all that has been spoken of in the preceding chapters, no innovations on the established regulations are necessary, as these generally act like a sword that cuts both ways. To change that which has become customary and deeply rooted in an army is always a critical matter, but to make wholesale alterations is ruinous. When all old rules are suddenly altered no one knows where to turn, and for fear of making a false move everything remains at a standstill. The latitude given in our regulations concerning the company columns is so broad, that it is only necessary to stretch a point when an emergency requires it, in order to meet any case that may arise; and after the object has been accomplished, the line can then be drawn in sharper again.

Let it be considered to what confusion it would lead if every one thought himself bound to invent new formations for particular cases, in which the regulations seemed to be unsuited. The following will exemplify this. The officer commanding a battalion had an idea that he could substitute a formation of his own, for that laid down in the regulations for a battalion marching on a *chaussée* in columns of sections, if it were to be surprised by cavalry. He considered that his idea was too good to be thrown away, and held that at the words "Column, form!" the men were to open out

right and left, and get into the ditch on each side of the *chaussée* and prepare to fire upwards. He thought that the cavalry would run the gauntlet between his two lines, and that not one of them would escape. But in what degree these ditches would protect the men, or if the enemy's cavalry were to attack their long thin lines from the other side, remained questions not comprised in his calculations. The manœuvre, however, was frequently practised, and the men who were accustomed at the well-known word of command to close up into serried ranks, and show a front on all sides, were now suddenly, entirely of their own accord, and at the same word of command, to open out, get into a ditch, and then face inwards! Very fortunately the battalion did not happen to meet with any cavalry. But this proves to what it would lead, if every exception were to be tortured into a rule, and if individuals were to think themselves justified and in duty bound to correct the faults of a whole system.

There is, however, one point in which we could wish that a departure might be made from the standing regulations. We refer to an uninterrupted and direct interchange between the line of skirmishers and their supports. According to the regulations, both the line of skirmishers and their supports are under one command. Now it may be gathered from the foregoing remarks that this connection is not at all certain of being maintained; for while many companies are engaged, every single company is broken up, and

the different subdivisions skirmishing in front are under a divided command, and have no firm, closed support in their rear, which is so essentially necessary. The leaders have to look after so many different things, that they can hardly accomplish anything in any direction. This dependence of one part of a company on another should be abolished. Whole companies should be employed together as skirmishers, and whole companies should remain closed up as supports; thus each leader will know what he has to do. The reciprocal action of the supports and the skirmishers can only be prescribed by the enemy. The leaders of both companies will have their eyes directed towards the opposing force, and can act as the opportunity presents itself.

CHAPTER V.

But, however careful may be the leading in the front line of the contending army, its supports and reserves included, it will never be in a position to repulse effectually an energetic attack by the enemy directed on one point. It is a law incontrovertible, that troops which have become slack from continued fighting (*vom gefecht mürbe gemachter Truppen*) are never capable of resisting the assault of a fresh and vigorous force. The enemy who is well acquainted with the advantages appertaining to the initiative will take care to strike the blow suddenly, and with overwhelming num-

bers, and not allow the distant reserve time to come up. If there should be no fresh reserve in the rear, then most certainly the attack cannot be repulsed.

The exclusive guarantee, and indeed the first condition, of the victorious result of a battle is a strong reserve, directly at the disposition of the General commanding. We do not mean one battalion, one squadron, and one battery, or what was up to this time commonly designated "a special reserve," to be kept in the rear, but rather one quarter or one third of the whole force. This reserve should not be posted for the purpose of occasionally coming to the front, in order to give a momentary preponderance at any particular point, or to take advantage of an unfavourable eventuality; but it should rather serve as a firm *repli* to the front line when it has no longer the power to resist, or is broken through by a decisive attack of the enemy, and should form a firm mass, untouched by the disturbing tumult of the battle, behind which the retreating line might be able to rally and re-form, and against whose fresh and well-formed columns, drawn up in the most perfect defensive order, the force of the pursuing enemy would be broken. The reserves have essentially a defensive object—they should stand fast and guarantee the security of the fighting line.

But it may be objected to this, that in the solicitude to prevent an unfavourable issue, by standing on the defensive, the opportunity is lost of gaining the battle by means of an attack;

that the first attack is thereby robbed of the forces which can alone render it successful; and that the history of wars is full of examples of the pernicious results of placing large reserves of troops which are thereby taken from the battle. To this we reply, that, in the individualised method of fighting which we consider necessary for our army, it is right to throw only as many troops into the direct dissolving chaos of battle as are strictly necessary. Battalions become swallowed up without any perceptible result. Three battalions which are fresh at the end of a battle for an attack, tend more to a decisive effect than six which have been fighting all day. By a wise retention, the strength of the troops is increased, while the enemy is perhaps induced to engage the whole of his power. He who has the last shilling in his pocket will conquer in the war, and he who has the last fresh battalion in hand will win the battle. Let any officer who has ever been in a difficult position in a battle be asked which he would consider most preferable for himself and the battle, to have a few more battalions in the chaos of the fight, or to have a well-posted reserve of fresh troops to retire upon? It appears that in nearly all the battles of 1866 a great portion of the troops never came under fire at all; at Trautenau there were five battalions that it was not thought necessary to bring to the front, or indeed to use at all. But instead of keeping these troops closed up as a reserve on one spot, they were moved about from a kind of conscientious anxiety to give them

something to do, and to enable them to contribute somewhat towards the result of the day. But it is often very apparent, that they contribute in the greatest degree towards that end when they remain quietly in the rear, and that the troops engaged in the battle advance with greater boldness and confidence when they know that there is a strong reserve behind them; and thus we have a reserve which answers a double purpose.

A *corps d'armée* may be thus divided:—fifteen battalions to fight in the first line, and ten to form the reserve. When the attack of the first line cannot penetrate further, and should its strength begin to flag, of course the enemy will take advantage of this failing, and will in its turn assume the offensive. If the fighting line, in spite of the advantage of the defensive—which has now gone over to them—cannot withstand the attack, they will by their retreat draw the pursuing enemy into the sphere of action of their reserve formation; this is intact, and further has the advantage of the defensive, and new chances may happen.

It is of little use to say that, in the endless combinations of a battle, it is not likely that this phase would manifest itself. Those who perceive in such a proposal something more than a mere pedantic school regulation, and see it in the light of a lively idea flowing from observation which, though always remaining the same, is still capable of being adapted in the most varied forms, under the most varied circumstances, will appreciate the true spirit of this view.

Compare the course of the battles of 1866, which are founded on facts. It is from a contemplation of these that this view has been formed. It is quite true that a weak offensive movement on the part of the enemy can often be repulsed by the front line, but the contrary may also happen. Even if the intention should be to remain most strictly on the defensive, the same strong reserve can never be dispensed with. When the enemy cannot penetrate any further against the front, he will frequently move in long circuits in the rear, and on the flanks of the army which stands upon the defensive. Its reserves, posted in the rear, will meet these troops who are thus endeavouring to turn their flanks, and in such partial combats many situations may occur, if the troops are ably distributed, in which the side that was originally the weakest will, at certain points, become the strongest. Let any one compare the battles of 1866.

It is only by these strong reserves that the General commanding can secure the means of exercising a perfect influence and mastery over the battle when it has once commenced. Should he neglect this, he simply leaves the result to chance. This, however, may not prevent the troops fighting in the front from possibly gaining a brilliant victory.

An order of battle can be drawn up in this manner: A first line, which may be formed according to the occasion and the nature of the ground, here in great swarms of skirmishers, there in close

columns, either massed or in several lines, but having this in common—that at one and the same moment in the battle, all can immediately be engaged; and a strong reserve, undisturbed by the tumult of battle, in the rear. While the General commanding partially gives his attention to the first line, in which his essential influence consists in directing an adequate number of troops from the front on the decisive points (whose leading is the business of the subordinate leader), his eye watches over all, and he always makes the immediate dispositions with regard to the reserve.

This necessary independence of the first line is founded on an essential condition, viz. that the two contending armies are armed with breech-loaders. Under the former state of things, a renewal of a repulsed attack could be reckoned on; now, it is impracticable. After a long and careful preparation by fire, the decisive moment comes as quick as lightning. Troops from rearward formations come up too late to be of any use, as the critical moment so soon passes away. To renew an attack on a defensive position, with any happy result, when its strength is once known, is quite out of the question.

But here the question first occurs: How will it be when there are breech-loaders on both sides? Will not all hitherto mentioned be considered as an accidental result of one campaign, in which only one side was so armed, and therefore leading to no general conclusions? Must we not seek elsewhere than in the battles of 1866 for proofs?

An examination of the battles of this campaign will tend to settle the point.

CHAPTER VI.

A most striking phenomenon is to be observed throughout all the battles of 1866. They were essentially begun, continued, and ended by the infantry. The other arms played a mere secondary part, and not unfrequently their influence was unfelt. It is very easy to give reasons in each individual case, and to explain why, under the circumstances, it was found impossible to bring the other branches of the service into action, the common and principal reason being—"we did not understand how, or consider it necessary, to make use of them, and therefore made no effort to bring them into action." This is scarcely a reproach. The army of 1866 was a "peace-time" army, as excellent as a long and careful peace-training could ever form. Its teachers were infantry soldiers, who only knew well their particular arm, and trusted implicitly to it. Thus, in the pressure to advance, so long as it seemed to succeed, there was a strong tendency to rely wholly on this convenient and ready instrument. The superiority of the infantry arm over that of the enemy, had the effect of rendering the inadequacy of the other branches of the service imperceptible, except in very rare cases. There was necessarily an absence

of that calm coolness which war experience alone can give, and which instinctively informs the leader when the one branch of the troops should be aided by the others, and enables him to employ all at the proper moment. So the infantry rushed on, and when its advance was checked, in its impatience it extended to the right and left, till the whole again moved on. This manœuvre generally succeeded. The superiority of the arm justified the greater license.

But the triumph of one particular branch of the army is only possible at the expense of the others. In the sequel we will examine the duties of each branch in its turn, and will here merely refer to a few facts, in order to understand more clearly their mutual relations.

It is a remarkable circumstance that out of 113 guns taken on the field at Koniggrätz, 108 fell into the hands of the infantry, while the cavalry only took 5. Under the conditions of the contest, it was to have been expected that the cavalry would have made the capture; these conditions were—splendid cavalry ground, uncommon extension of the enemy's front, badly supported wings, and much demoralisation and disunited tactics; and on our own side a more numerous cavalry. Certainly there will be no want of reasons to show us the causes of this failure of the cavalry. But all these reasons put together prove nothing more than that it was not understood, or not considered necessary, that they should act on the occasion. A similar example is afforded by the artillery at

Koniggrätz; the first army, from 8 till 2 o'clock, carried on essentially an artillery action. But did their artillery attain its object? That could only be to make a breach in the enemy's formation, when the infantry could attack, and thus prepare their defeat. But they never once succeeded in making any impression on the imposing Austrian artillery formation; they barely succeeded in holding their own (*ihrer Haut zu wehren*). Had not the Prussian infantry appeared in the rear of the Austrian artillery, they would have had no occasion to surrender their position. Thus, in this battle, the artillery was not capable of fulfilling its task. If it be objected that, on this occasion, the object of the artillery was not to decide matters, but merely to hold the enemy in check till the Second Army, or the Elbe Army should come into action, and that these remarks are made rashly, without due regard to the circumstances; we reply, that it was not only possible, but even probable, that these armies might have been met on the march by the Austrian reserves, and the time and place of the probable meeting should have been well considered. If, then, these armies had only been in a measure delayed by the Austrians, we should finally have been obliged to attack, if we meant to obtain any decisive results. Would the preparatory artillery fire have been sufficient for this attack?

It may perhaps also be said, that the Austrian artillery had the advantage of being on the defensive, and that always gives an advantage over the offensive; but there lies a contradiction in this:

the artillery of one side must always be on the defensive, but that it must therefore necessarily conquer, can hardly be maintained. It is the business, that is, the tactics of the one to make (if there is only room to place the guns) such dispositions as will take away the advantage of the defensive of the other. If the artillery concede, that under the circumstances they will not be able to effect their object, then all the work is thrown on the shoulders of the infantry.

The expression "infantry tactics" is essentially a scientific abstraction, necessary for the fixing of scientific ideas and elementary forms. In a battle there is no such thing as infantry tactics; tactics are for the handling of the three branches of the service united. It cannot be said at any moment during a battle—here the artillery tactics cease, and those of the infantry commence; both of them are constantly interwoven one with the other. Desperate circumstances can alone justify the employment of the infantry only, in the crisis of a battle; no theoretical rules can be laid down for infantry fighting under such circumstances, any more than for a battalion that is without its arms. Should the Generals commanding insist on the infantry fighting alone, they certainly would not know how to make use of their materials. When the infantry blazes away at the enemy, and the enemy returns it; when the cavalry of both sides mutually attack, and the two artilleries cannonade each other, or, according to the technical expression, "when they mutually seek to draw the fire

upon themselves," the tactics of the united arms can no longer be spoken of. Faults committed incur no penalty when both sides are equally blamable. The essential lever in war is the infantry; if that be broken, the battle is decided. Thus all the three branches should concentrate their force against the enemy's infantry, and only pay attention to the other arms in as far as it is absolutely necessary for the purpose of defence. It is a great truth that to work with concentrated force on one point—in battle as in the ordinary affairs of life—is always a warrant for success. The artillery, however good or numerous it may be, will never avert the loss of the battle, when once the infantry has been forced to give way.

This "secret" of victory is not one necessary to be kept; it may be known, and still the power to make use of it may not be possessed. This point is the test of the eminent warlike qualities in the leaders of armies. It is only when this is felt, and when instinctively, and without intermission, this one decisive mark is aimed at, without regard to any minor object, that the highest results can be attained.

CHAPTER VII.

If neglect and failure with regard to the tactics of the three arms were less felt on account of the needle-gun in 1866, in future the chance will not arise again; the question, therefore, is what element is now necessary to secure a preponderance?

The proposals hitherto made are scarcely satisfactory; from one we may deduce, that the firing will be mutually left off, and that the bayonet will then again resume its old (?) rights. But that can only happen when both sides have come to an agreement to renounce all firing; otherwise the attacked party would always use the great defensive power of its weapon against the one attacking; and the fights of Nachod, Laufach, Tauberbischoffsheim show sufficiently what the result would be. Others put forward regimental artillery-mitrailleuses. It is not to be conceived how the quick movements of infantry on every kind of ground can be followed with instruments of this kind, or how they can be made use of under a fire of small arms. Only let the wood of Maslowed be recollected. What would the fourteen Prussian battalions have been able to do with such mitrailleuses? An arm that can only be reckoned on at times, is worse than none at all: it leads to false calculations. These artificially forced ideas (*Treibhausideen*) all come to nothing in the simple, mighty wave of battle.

The supposition that at the commencement of

the next war we shall remain strictly on the defensive, and allow the enemy's columns to advance among our bullets is a very rational one. If only the enemy will do us this pleasure, the matter is soon settled. They will, however, think twice, and well digest the matter, and possibly restrain a little their fiery dispositions. They will, perhaps, forming conclusions from our rapid proceedings in 1866, think to make us rush in among their bullets, and when we have been well sickened, go in at us with the bayonet. Thus we may stand, fighting shy of each other, and if we should further develop the consequences of this picture, we may both seek to get out of the mess by manœuvring. But the matter would not take this tame course.

In the next war that side will obtain an unconditional tactical preponderance which best knows how to make use of its artillery, or rather that side which does not put off this practice till the moment that the war commences, that is, the side whose artillery has had the best tactical training.

CHAPTER VIII.

A POSITION which is defended can only be approached to within 400 or 500 paces by troops covered by skirmishers. A preparatory fire o small arms against the defenders who are under cover will never have the effect of rendering a storm possible; according to the most simple calculation, the storming party, however strong its columns,

will be repulsed, always supposing the position to be in the hands of brave troops.

But nothing can withstand a powerful preparatory attack by artillery; if the element to be broken be the infantry, it can only be done by this means. That in particular cases, the victory can be gained with an inferior artillery does not invalidate this rule. There are heads that can utilize the most deficient materials; genius, or an iron character in a General, creates characters in subordinates which would not otherwise be developed; many such became active in 1866, but they cannot be reckoned on as a rule.

As we have before remarked, we cannot boast much of the support we experienced from our artillery in the last war. If we examine the whole of the battles, we find that, in spite of the large number of the disposable batteries, our artillery was not often in a position to command the field in the presence of the Austrian guns. We brought a numerous and imposing artillery into the field, it is true, but how many guns ever came into action? they planted themselves here and there among the reserve, and never found place anywhere to engage. It would indeed be sufficiently amusing to hear this conduct excused; an artillery officer who has a tactical eye for the ground will always be able to find room. We will give an example.

At the battle of Trautenau suitable ground for artillery was wanting. In that long and sanguinary action, in which the Austrian artillery was

never for a moment silent, very few Prussian batteries were brought into action, and these only very partially. Their continuance under fire may be judged of by the returns of the loss. The sixteen batteries had only seven wounded out of the whole loss of 1,338 men; of the total loss of seventy-eight horses, two only fell to the lot of the artillery; this makes not half a man a battery, and one-eighth of a horse.

Most certainly it was not from a want of personal courage in the artillery leaders, but the ground appeared questionable, and it was not considered prudent to expose the artillery even to the possibility of a loss; and for this reason the greater part of the batteries were not brought into the actual battlefield, and even the few who were engaged were withdrawn just at the moment when their activity was commencing; as if it were better to lose the battle than a single gun. There was neither time nor space wanting to have established the whole of the ninety-six guns. It is, however, only those leaders whose talent is able to command the tactical situation who can carry through a bold and daring enterprise. Artillerists without tactical training and daring, who have merely a knowledge of technical gunnery, will always find excuses and make impossibilities.

We will here adduce an example, taken it is true from a peace-time occurrence, but which is not on that account the less instructive with regard to judging of difficulties. At a divisional field-day a troop of horse-artillery was retiring at a gallop,

it came to a ditch, it pulled up, took ground to the right, and passed the ditch by a bridge some hundred paces farther on; at the same time and place, and under the same circumstances, a field battery of twelve-pounders came at a gallop to the same ditch, without hesitating a moment it went straight at it, and took it at one bound; which was the light, and which the heavy artillery?

A case so glaring as that of Trautenau may actually not have occurred again in the campaign; but on no occasion did the artillery play a conspicuous part; individual batteries at Nachod and Skalitz, no doubt, showed a great deal of artilleristic courage; true, at the commencement of the first battle the conditions would only allow of a partial employment of the artillery; but it can never be said that the artillery manœuvred at all, the most it did was to hold its own against the Austrian artillery till the end of the battle.

At Koniggrätz, as we have already said, the Prussian artillery of the first army did nothing, but there was no want of room to have planted a greater number of guns than the Austrians, for from Ober-Dohalitz to Trisowitz is some 4,000 paces. But it may be objected that these batteries would have had their line of retreat cut off by the river Bistritz, and would have been obliged to have ascended singly from behind the wood of Sadowa under the overwhelming fire of the Austrians. But then, why were not as many bridges thrown over the Bistritz as the materials

would allow? For what purpose are pioneer battalions? It was very easily to be seen, early in the morning, that there would be a long halt here, and how disadvantageous the narrow defile near Sadowa would prove. Or, was the possibility of throwing bridges over the Bistritz considered to be so out of the question on account of its swollen condition, that it was not worth a moment's consideration? If so, then pioneers are useless, their power of constructing bridges ceasing at the very time that it is most necessary to exercise it.

Here was a splendid opportunity for an artillery General to overcome all difficulties, and to bring into play the full resources of the whole of his artillery reserve; certainly it was a very difficult task, but the leader of the artillery in such an army should be a General of the first class.

A still more trivial part than this at Sadowa was played by the artillery of the Elbe Army. It never did anything more than exchange shots with the enemy, who occupied a defensive position at a distance of from 4,000 to 5,000 paces.

The excellent conduct of some individual batteries does not invalidate this judgment. Artillery operations on a grand scale are not made up by adding together the independent prowess of individual batteries; they should be carried out according to proper laws and large views. But many materially unfavourable conditions, such as a large number of smooth-bore guns, and being constrained generally to take the offensive against the Austrian artillery, well planted in defensive posi-

tions, required an unusual exertion of the talented element in tactics.

There will not be found many voices, even among artillerists, who can assert that they are contented with the work of the artillery in the last campaign. The question is much too important, too critical to be here palliated on account of respectful considerations. The tactical, not the technical, training of the artillery, will have a decisive influence on the next campaign. What is the use of an artillery which makes capital practice indeed, but which is never in the right place? Much better, one that blazes away cheerily; that at any rate rejoices the hearts of the men.

Is the tactical training, then, of our artillery a sufficient one?

It would be very fortunate if competent judges could answer this question in the affirmative. But with regard to this the only competent decision will be found in the battles of the next war.

CHAPTER IX.

In future it will only be possible for infantry to storm a position when aided by the fire of a powerful artillery. To this end it is necessary that the batteries should be extended far from the centre on each wing. An artillery which is posted in the centre before the attacking columns loses the possibility of suddenly deploying its whole

force; it is stinted as to room, and will in most cases be obliged to cease firing at the moment that the infantry advances, and cause the whole fire of the enemy to be concentrated on the most sensitive part. The considerable distance of individual batteries does not prevent their working in common with the rest, and on the same point, while their position on the wings allows of their throwing in a flanking fire. In this position, however, they are necessarily exposed to danger, and, from a vague fear that the guns may be taken, they are often allowed uselessly and inoperatively to cling to the brigade. Artillery should, however, be made use of so as to be able to work together with the infantry, and yet immediately to cease that connection and act independently. To this end we (Prussians) must alter our system of escort to the guns.

Up to this time our escorts have been given, according as it is laid down in the regulations, on the most different plans, through which one fundamental principle shows itself, viz. the general desire to get rid of this disagreeable service as cheaply as possible. In some cases a detachment, composed of men taken from all the six battalions of the brigade, with one officer per regiment to command, forms the escort; a plan which is worthless as having no inner stay, but which breaks up the order of the infantry as little as possible; in other cases individual subdivisions are made use of much to the disgust of the captains of companies. Then, at times, whole com-

panies are told off for this duty who go to their thankless and troublesome work in anything but a good humour. Even squadrons have been thus employed, but only as a matter of form or from a vague feeling that they must be employed somehow. But how can a squadron ever perform this purely defensive duty? If it should charge an attacking squadron, the battery remains without any support, an infantry attack being quite overlooked; moreover, even pioneer companies have been put to this duty. The immediate inventor of this hussar practical joke certainly must have been very proud of it, and the pioneers themselves entered into it with a kind of wild inspiration. Here was a brilliant future for them, in comparison with their otherwise ordinary modest duties. But this is making use of a force for a purpose for which it was never intended.

When the ability to allow a battery great freedom of movement is appreciated, it will be seen that the principle, which should guide the selection of an escort, is only that it may give a feeling of perfect security, and then a different principle will be adopted.

We have a corps in the army whose selected material makes it fit for the most arduous duties, and which possesses an essentially defensive power, that is, the *Jägers*. In the general model of the infantry it is certainly difficult to admit any special corps, and thus we see the Jägers made use of like the rest; not unfrequently the whole four companies are together in battalion. The ex-

cellent qualities for which the Jägers are distinguished permitted them to supply that which was wanting in themselves for that kind of service, and even enabled them to accomplish with great ability that which was contrary to their special training. But by employing them thus their best power is thrown away. To use Jäger companies as a baggage escort cannot be a proper employment for them. This speciality is so disproportionately small, that it will be well only to employ them on the more important services where their intrinsic worth and great defensive powers can be brought into play. For a Jäger company no more suitable, important, and honourable post can be assigned than that of escort to a battery which is in an exposed position on a wing. If a friendship of association should spring up between the men of such a battery and the Jäger company which is their constant escort, one would then learn to rely upon the other, and thus a surprising freedom of movement would accrue to the battery, while the Jäger company would have a noble opportunity of sustaining the reputation of its special arm. Four four-pounder batteries, with leaders picked out for this special service, might be joined to four Jäger companies, having leaders carefully selected for their personal qualities. The other batteries might have, with the same view, infantry companies told off for their escort. Besides this, it is indispensably necessary to post with every battery from half to a whole troop of cavalry, in order to clear the ground to the front and flank when the

artillery might be required suddenly to move quickly forward or retire, and with which movement the infantry would not be able to keep up for the moment; and during the fire it might take up a position and keep the side of the battery clear. Otherwise, as is now the case, at the word "Trot," the battery leader, with a glance at the despairing faces of the infantry, laboriously trying to take up the pace, must trust to his lucky star. Most certainly some will find themselves considerably put out of temper (*sich sträuben*) at this "useless" breaking up of battalions and squadrons. "Concentration of force" is the favourite expression of our time; but there is a point when the solicitous keeping together of a force is like the proceeding of a skinflint who has his money stolen because he will not go to the expense of a strong box. If we are to require bold tactical movements from a battery leader, before all things we must put him in a position where he can have confidence. These particular supports are not only useful, but in most cases have a direct influence on the battle.

If the attacking side shall have succeeded in establishing a superior artillery, that is, as many batteries as it has at its disposition, the first question to be asked is, which is the point to be attacked? If one battery exchanges shots with one of the enemy's batteries, another with another, and the third fires on an occupied field-work, while the fourth thinks that it has discovered the position of the enemy's reserve, we cannot call this an

artillery action having a common purpose. To silence the artillery of the enemy cannot be the most important object of the side which takes the offensive. Even if this should be done, the advance of the infantry on a position defended by breech-loaders is not possible. To silence the attacking guns is the essential object of the artillery on the defensive, then the infantry will know how to repulse the attack of the enemy's infantry; but artillery on the offensive should, on the contrary, make it the principal object to play upon the infantry of the enemy. An attack can only be thought of when this has been weakened. It has only to engage with the artillery of the defensive in so far as is absolutely necessary, always having the principal object in view.

It will depend upon the whole disposition of the battle, on which point of the enemy's formation the decisive attack lies. The officer commanding the attack has nothing more to do than to indicate to the nearest batteries where he considers this point to be, and then the rest will direct their fire at the same, in as great a measure as their occupation with the enemy's artillery will allow them. The point of attack need not be especially pointed out to the infantry, for it will, by natural instinct, make its efforts at that point which the artillery has opened out and made easy for it. At the right moment, all the troops, however separately placed, will hasten to the attack. The infantry which hurries to the assault has not much to fear from the enemy's artillery, provided

guaranteeing its mutual action, not only throws continual difficulties in the way, but also necessarily leads to a disruption of the order of battle. With us (Prussians) the artillery of an infantry division has no post told off for particular brigades; yet the case of a brigade operating without artillery is scarcely conceivable. The numerous artillery of a *corps d'armée* dragging on behind the whole body may perhaps meet with defective ground, and thus be precluded from coming into action at all. A greater distribution of the unwieldy masses will, in most cases, greatly facilitate their movement, and there can be very little difficulty in concentrating them again. At the decisive moment indeed, the detached parts can all unite, and the idea that one portion of the army, with its artillery detained somewhere, can be left out and not be able to share the action, may be met by the fact that very often the whole reserve artillery concentrated into one mass fails to come into action at all.

Here perhaps would be the place to go more deeply into the reasons which have misled us entirely in our primitive formation of these great masses of artillery, and (as will be hereafter shown) of cavalry, in the original order of battle. Strategy offers us a very intelligible analogy, and for that reason should be here stated.

The fundamental strategic principle of Napoleon, to which he owed his victories, was the concentration on the decisive point of the largest possible masses of troops. That fact in itself would soon

have been acknowledged; but it was often perfectly lost sight of, that the method of accomplishing this was the very thing which constituted his genius. It was thought possible to gain by fixed forms that which genius alone can accomplish, and this was the reasoning employed: "In order to have all the disposable force together in the decisive battle, it is simply necessary to keep them all together and never to let them separate at all; thus it will be very certain that all will be together on the decisive day." And this was supposed to be a universal formula. But a large army which is kept concentrated for any length of time is its own worst enemy. Large masses can only be moved and provided for with the greatest difficulty. They would soon be forced to separate in order that they might exist. The fundamental principle should rather be, to keep the masses as long as possible separated; unite them only at the decisive moment, and then again separate them when the object is gained. The decisive moment, however, cannot be fixed by any rule; to seize on it is the work of genius, which ignores all rules. Austria and Prussia offer examples in 1866, which may be considered as excellent models. The Austrian army concentrated itself at Olmutz, in order that, if the enemy should advance into Bohemia, it might move against it; but it was kept concentrated even on the march, so that at any moment it might be ready to join in the battle. The Prussian army advanced separately from four different

directions. If the united Austrian army had managed to meet these divisions singly, its strategy would have been triumphant. It merely acted according to the dictates of common sense; but the Prussian strategy was based on the hope of success, and on being able to seize the right moment for concentrating its forces, which is only to be discerned instinctively, and which defies all rules. Those however, who do not venture to trust to genius, however much it may sometimes be subject to error, will do well to act according to forms and rule; but if these lifeless forms ever come in contact with the true living spirit, they will most certainly be annihilated.

The Napoleonic tactics show the principle very clearly; large cavalry and artillery forces are seen in perfect working order, and it is then concluded that these have only to be massed together in order to secure the victory on the battlefield; but Napoleon only formed such masses when he had leaders qualified to command them, and thus the leader was the spirit, the essential agent, for whom the masses were created; at other times they were only formed and massed on the field for the immediate occasion. And here was the great difficulty, rightly to discern the moment when a great mass of guns should be placed together for a time, and when they should be separated again. If we were to try to reduce the inspirations of genius to rule, and thus secure success, we might indeed transport large cumbersome masses into action securely enough; but

when once there, we should perhaps be obliged to separate them again in order to utilize them.

The following study of the cavalry will furnish proofs of the preceding remarks, and will give us an opportunity occasionally to refer to our fundamental principles.

CHAPTER X.

To the reciprocal action of the infantry and artillery of which we have hitherto spoken we must now add another agent, the cavalry.

Even the cavalry themselves would hardly wish us to acknowledge their general efficiency in the Campaign of 1866. If they should think that their prowess on that occasion was the best of which they were capable, they may prepare to sing their funeral dirge.

The gravest impeachments of the disproportional backwardness (*zurucktreten*) of the cavalry are fully borne out by the brilliant individual fights of Nachod, Tobitschau, and Rokeinitz. These affairs prove the possibility of an efficient co-operation on the part of the cavalry; the material is good, and at the same time it is apparent that the opportunity is there, if it is taken at the critical moment. Infantry and artillery are obliged frequently to await the occasion: the cavalry can and should make it; that is, by great and zealous efforts, should force it on (*erjagen*) for itself.

In speaking of the action of cavalry, we must

distinguish between divisional cavalry and the cavalry division ; the first has to work in immediate connection with the other branches of its division : the latter—the cavalry division—as an independent tactical body stands more frequently in a strategical, rather than a tactical connection with the rest of the army.

In the last campaign we made the greatest sacrifices, in order to possess these large masses of cavalry. The *corps d'armée* were provided only in the most sparing degree with cavalry, and, as it afterwards appeared, in insufficient numbers. Great masses of horse were kept together continually in spite of the difficulties of feeding and moving them. Cavalry opportunities occurred such as are seldom met with in the history of wars, a totally defeated army had to retreat without any re-inforcements for more than thirty (German) miles over a favourable cavalry ground where there was no strong position : and what was the result ?

Only once did the cavalry find an occasion which, according to their judgment, was a fit opportunity, and that was on the 15th July, 1866, at Rokeinitz. The infantry had here broken through one of the enemy's retiring columns, the cavalry division passed through the gap thus made, and throwing themselves upon the second column of the enemy took them by surprise. But of the twenty-four squadrons which had been kept together with such pains throughout the whole campaign, there were only seven that came into action at this decisive

spot! a number which might have been brought together, without much difficulty, from the divisional cavalry. Let the reasons be what they may, at any rate it is quite clear, that massing the cavalry together out of the fight is no security for their combined action in the fight.

The posting of the cavalry corps of the first army in its advance into Bohemia, in the rear instead of at the head of the army, according to the spirit of the Napoleonic custom for cavalry masses, may have been caused less on account of the difficulty of the ground, than from a wish to prevent a possible check to it at the commencement. It was thought preferable to employ the infantry, whose success was considered more sure, though it required more labour, and was less extensive. At any rate, these reasons are very plausible.

But it led finally to this result, that on the 2nd July we were altogether in the dark as to the whereabouts of the enemy's army, which was concentrated opposite to us at the distance of only one (German) mile. In this situation, if the cavalry had only done their duty in the least degree—if a cavalry regiment had been sent forward in all the principal directions, with orders to proceed till they came either upon the Elbe or the enemy's infantry—we certainly should have gained that information which, as it happened, was mainly owing to chance.

Reconnaisances, such as these, are essentially the business of the reserve cavalry, not of the

divisional cavalry; and on this occasion they were the more indicated, as we had always to keep in view our communications with the approaching army of the Crown Prince. We were not in a position to make our dispositions solely with regard to our own army. The reasons for these proceedings cannot now be precisely explained; but the fact is self-evident, and cannot be denied.

The action of the cavalry corps on the day of battle did not go beyond the limits of the service of divisional cavalry; the few regiments which attacked, merely acted in this manner. The cavalry division of the second army, as we see from the official account, was not allowed by the reserve artillery of the first army corps to pass, and thus it followed in the rear of the whole. It seems as if it were a kind of irony of destiny that the first army corps was always unlucky in what it did, as well as in what it omitted; it must be ascribed to this corps, that it paralyzed the action of this cavalry division, and thus it may be considered responsible for what the others omitted to do. As to how far the conduct of the cavalry on the 3rd July was influenced by personal considerations, is not to be judged of at present—this will devolve upon history. The duty of the present time is to draw useful conclusions from uncontroverted matters of fact, by comparing them with those of past times. The fame of the Prussian cavalry was established in the Seven Years War. The bare name of Seidlitz has, even now, such influence over the imagination of the soldier, that involuntarily he

sees, in his mind's eye, flying masses of infantry pursued by the cavalry which, completing the commencing disorder of the enemy, reaps the harvest which the other arms have sown for them. This imagination takes definite shapes whether we will or not. We see Ziethen stationed with twenty-five squadrons behind the wood of Popowitz. No one asks how he got there, but we are convinced that it could not be otherwise, for nothing could prevent him from making his way thither. And at the moment in which Seidlitz, with his thirty squadrons debouches at Dohalitz, Ziethen also appears. But when we have come again to our sober senses, we simply say that it is too much to require of destiny that the great events of two centuries should be reproduced on the same spot.

After the battle of Koniggrätz, we lost the traces (*Fühlung*) of the defeated enemy. It would be easy to give a variety of reasons for the general suspension of activity the next day, but it is better simply to acknowledge that the suddenness of the victory benumbed our powers for the moment.

The success, for the accomplishment of which we had put forward our best powers, surprised us finally by its magnitude. There is a modesty in it of which we need not be ashamed, even if we calculated falsely. We had gone into the field with a perfect self-confidence indeed, but also with a respect for the enemy which we had just conquered. Involuntarily we still had a respect for him, even after the victory.

This peculiar insecurity of the army, after the

battle, shows most particularly the inactivity of the cavalry. A cavalry accustomed to war would probably have utilized the situation of the 4th on its own account. An independent cavalry leader would take his directions rather from the enemy than from his General. On the 5th this cavalry corps followed in the second line, while the cavalry division of the second army alone took the lead, and crossed the Elbe. The command of this division was given to the army corps which followed it, and after it had at length succeeded in coming up with the enemy at Zwittau, it was obliged to give up the pursuit, as the corps which was behind had taken another line of march. On the 14th it again came up with the enemy. The 15th has been already described. With this first action of the cavalry division, in which it acted as a division, its activity ceased. True it remained from this time at the head of the army, but without showing any important activity. The cavalry corps of the first army was not employed at all; the advance of the united armies, commencing from the 7th, was so compact that it was impossible for it to take the lead of the infantry.

The action of the divisional cavalry appears generally in a more favorable light. That proves, as we have already remarked, that the material is good and able to perform all that is required of it. But, by putting together a mass even of small cavalry units, we can never accomplish great cavalry operations. The leader of a cavalry must be conceived in a chivalrous spirit.

CHAPTER XI.

We may gather from the history of the wars of former times, that the efficiency of large cavalry masses depends on their leader. A cavalry leader cannot be guided by special orders; he is a General among generals of the highest grade, and should know how to obviate all difficulties which stand in the way of his efficiency. The moment when he should use energetic measures passes away quickly, so that any counsel, except that within his own breast, would be too late. A man such as is required is not necessarily to be found at all times in an army. Genius is not a frequent gift. It is only, however, when a born cavalry General is to be had, that the formation of large masses of cavalry is justifiable; they are not absolutely necessary; but, if a mistake should be made, and the massed cavalry delivered into the hands of one who afterwards is found unfit to command them, the army would be robbed of the co-operation of a powerful agent. A mass of cavalry which remains idle would perhaps have performed good service if it had been separated into smaller divisions. If, not being able to reckon on a born cavalry General, we advocate the distribution of the cavalry by brigades to an army corps, it must not thereby be understood that we renounce altogether the operating by large cavalry masses. On the day of battle the different *corps d'armée* must always form a junction, and

the assembly of the several cavalry brigades of each, so as to form a cavalry division, can be attended with little difficulty. If the constant concentration of the cavalry is found not to secure their common action on the day of battle, as was proved at Koniggrätz and Rokeinitz, perhaps the opposite method of forming the cavalry division on the battlefield will give a better chance of success. The brigade Wnuck was formed for the first time on the day of the battle from different army corps, which, however, did not at all militate against its brilliant efficiency. This method may obviate further the very considerable difficulty of maintenance, &c., and possibly also very hazardous personal questions. In the formation of the original order of battle the chief command of the cavalry is only in competition between the oldest Generals of that branch—perhaps very able and meritorious officers—but who may be, nevertheless, wanting in the peculiar talent necessary for the command of large masses. If the divisions and corps of cavalry are formed on the spot, it will be easy to choose the officer to command from among those who may be considered the most worthy of confidence. A young General in such a position would then only think of using well the opportunity of gathering his laurels, which might not again occur to him during his lifetime.

Whether the cavalry will be able to play an especially prominent part in future wars, may be decided by the experiences of 1866, as well from what did happen as from what did not. So long

as rapidity, boldness, and dash (*Waghalsigkeit*) are active agents in war, the cavalry will retain its importance. A cavalry devoid of these qualities, but merely possessing good intentions, obedience, with ordinary bravery (*hausbackener tapferkeit*) and a laudable modesty (*löblicher bescheidenheit*),* is worse than none at all. In the last century, even when the fire-arms were not to be compared to those of the present day, the cavalry were never supposed to attack unshaken infantry, or to move within grape-shot range of batteries. Then, also, it was well understood that they must watch their opportunity. These conditions have altered very little. If the greater range of the fire-arms of the present day obliges the cavalry to keep their distance, at the same time the "*terrein coupé*" on which battles are now fought will afford them many opportunities for a nearer approach under cover, without acting disadvantageously on their efficiency. But the cavalry must learn to accustom itself to the new feature in war of the trenched and broken ground, and not demand plains, on which fire-arms can be used against them with the greatest advantage. A lighter cavalry is required, and not a heavy one.

The proper place for the cavalry is a considerable distance at the head of the advancing column, where, if possible, they should be distributed by regiments, to gain information, to keep up the communication with neighbouring *corps d'armée*,

* Who ever heard of a modest dragoon?—*Translator.*

and thus bring cohesion and security to the whole body. During the fight a simlar *rôle* falls to their share. They should look to the security of the wings, and endeavour to turn those of the enemy. Trautenau affords an example of this. If the Prussians had had at their head the whole of the cavalry brigade of twelve squadrons which was present, they would easily have been able to drive back the Austrian cavalry behind Hohenbruck as they debouched from the town, to the west of which they were stationed, whereas the few squadrons of dragoons who were at hand were not in sufficient force to master them. The place of the cavalry brigade clearly was here in the front, in order to watch the progress of the battle. Here it would have been able to have observed and threatened the advance of the Austrian brigade on the *chaussée* of Burkersdorf; its retreat never could have been endangered. Instead of this, during the whole of the fight it remained to the eastward of the town with the Aupa before it, and heights, formed by almost inaccessible rocks, which men on foot could only climb with difficulty. Posted as they were, their purpose could only have been, to join the rest of the troops at the proper moment, on their advance or retreat. Further, if a cavalry regiment had been sent forward to the left wing of the eight battalions of the second division in the direction of Alt-Rognitz to Rudersdorf, the attack on the left wing would have been discovered at an early hour, and an uninterrupted communication with the first divi-

sion of the Guards would have been rendered possible. The most insignificant demonstration in that direction would have brought the Austrian attack to a stand.

The thin and extended lines of formation in battle will, in future, afford the cavalry opportunities of acting in a new aspect, by giving it occasions for energetic and immediate co-operation with the infantry and artillery in action. If the infantry works with the cavalry at hand, the latter will then be in a position to take advantage of the decisive moment, which has been prepared for it by the artillery, and the present tactics with regard to skirmishers which require swarms of men in loose order will reap the richest advantages. It will not be impossible for them to throw themselves through gaps in the enemy's line on their reserve; and even if no success were to follow, they would still spread terror and consternation. Indeed the moral effect that an efficient fire of musketry or shell always makes even on the best infantry, causes a favourable opportunity to arise for the use of the cavalry. By an independent action the horse-artillery can now prepare an attack at a far more effective distance than formerly.

The cavalry man of the present time must not shrink from the common law, which requires that he shall manifest his individual qualities. He should be more of a partisan* (*parteigänger*). Freedom of judgment should be required of him which will fit

* *i.e.* designed to carry on a desultory warfare.—*Translator.*

him to judge of the whole current of the battle, and to know how to attack at the right places and at the proper moment. No cavalry man should be ordered to manœuvre on the flanks or in the rear; he himself must judge when he should do so. He should also know the weak points of the other arms so as to support them, and their strong points in order to draw advantage from them.

Our cavalry altogether is still upon its trial; but we have no reason to look with mistrust on the issue.

CHAPTER XII.

It now remains for us to cast a glance on the action of the fourth arm in the campaign, the engineers. It is a strange circumstance that the two very branches of the army which played so important a part in the Campaign of 1864, the artillery and engineers, should fall so much into the shade in that of 1866. On the part of the artillery this may be explained by a disproportionate preponderance of its technical over its tactical training, a fault in artillery which can never be too much denounced. An excuse may be suggested for the engineer, that the very rapid offensive operations of the campaign afforded neither time nor opportunity for his co-operation, which is always essentially of a defensive nature. These views would nevertheless rest upon a mistaken notion of the facts of every battle, and also of the proper duties of the engineers themselves.

Pioneers were left behind at the rear halting-

places by preference; thus at Reichenberg three companies were employed as a baggage guard, which at once shows that the services of a company of infantry were prized higher for the battle than one of pioneers; the latter, however, were at times used as infantry in action, in order to make them in some manner useful. Thus they followed in the retinue of the army, an encumbrance which every one sought to get rid of with as good a grace as possible. What officer of engineers can say that he feels satisfied with the action of his arm in the campaign?

We cannot here refrain from a little anecdote:—

An officer of engineers had formed the praiseworthy wish to hear, at any rate once, the whizzing of a shell, but he waited in vain for an opportunity, till the middle of July. At this time his division was before Olmutz; one day a shell came from the fortress—a veritable, bodily shell, and flew whizzing right over the cantonments of the pioneers; but, poor fellow! that very afternoon he had got a few hours' leave of absence, and when he returned, he learnt that it had been there, but, like "The maiden from foreign parts," * it had vanished and left not a trace behind. Deep sense often lies in a childish tale.

According to Prussian ideas, intrenchments had fallen into disrepute. They were thought to be detrimental to that offensive spirit which was the leading principle in our conduct of the war. The example of that of the Austrians

* A comparison from Schiller's "Mädchen aus der Fremde."

led us to scout the idea; but we rejected the good with the bad. (*Man schüttet aber hier das Kind mit dem Bade aus.*) The fault of the Austrians was, that they threw up their intrenchments beforehand, and then expected that the fight would take such a course as would render them useful. Instead of making the fight dependent on the intrenchments, we would make the intrenchments dependent on the fight. For the possibility of doing this, we would refer to the situation of the first army on the 3rd of July, at from 8 to 2 o'clock. Against the well-posted Austrian artillery we could make no sufficient head with our own; we plainly saw that we should be obliged to hold the position till the coming up of the second army either obliged the enemy to retreat, or at least diverted so much of its force as would enable us to take the offensive. The last was the most probable. Was it not, then, apparent that we ought, favoured as we were by mist and rain, to throw up, by means of the pioneers, *epaulements* for as many guns as we had room for, at 2,000 paces, opposite to the enemy's line of fire? It would only have taken two hours, or till 11 o'clock, to complete them all. Even if the Austrians, in spite of the fog which partially covered the position, had fired upon our long and thin lines before we could obtain sufficient cover, the work might have been rendered more difficult, but it would not altogether have been prevented. An attempt would certainly have been worth while, in order to have gained a decided preponderance, without being reduced to depend

upon the second army, whose success was by no means certain. The artillery of the Elbe army was in a precisely similar situation, although it had no opportunity of developing itself, for there the woods would have greatly facilitated the rapid construction of *epaulements* on their borders, into which the batteries brought by the road through the wood could have been immediately placed and brought into action. Thus we ought to have fortified the borders of the wood at Sadowa, in order to have been prepared for an attack from the Austrians.

In a still more decided manner might the pioneers have operated at Trautenau. As the retreat of the battalions scattered from Hohenbruck to Alt-Rognitz could be no longer doubtful, and as we were aware that, as far to the rear as the Aupa, there was no reserve worth mentioning present to relieve the hard-pressed troops; an intrenched battery on the Kappellenberg, or, still better, *epaulements* on the heights of North Krieblitz (for the construction of which there was ample time), would have supplied the want of these reserves, and without any doubt have re-established the battle. But there were no pioneers, we had left them behind, though even there the same evening they might have co-operated in a most efficient manner. As, from time to time, the troops were driven down from the hills to the east of the town into the vale of the Aupa—an event which might have been foreseen for hours before—it was most important that the corps should occupy a defensive

position, *à cheval*, on the road to Lebau, to the north of Parschnitz, and pass the night in front of the defile, in order to be ready the next morning to co-operate again with the garde corps. If we had immediately thrown up *epaulements* for our ninety-six guns at the defensive position selected, and occupied them with the reserve artillery on the spot, under the protection of the five intact battalions, the position would have been impregnable, and the retreating troops could have been re-formed behind it without danger. There was abundant time to have done this. But perhaps the soldiers were not sufficiently engineers, or the engineers soldiers enough, for this consideration to have entered into their thoughts.

The engineer, in virtue of the character which is particular to his branch of the service, may hold an equilibrium in military operations. He may render the success gained by an impetuous attack secure by quickly throwing up field-works (*Bauten*) behind the attacking force, and in the same manner stop a retreat by hastily constructed intrenchments, the holding of which then concerns the honour of the troops.

But it is not only by defensive, but also by offensive measures that the engineer can operate most effectually. It has been already shown what an important influence a number of bridges thrown over the Bistritz might have had. They would have permitted of a simultaneous establishment of the artillery, and made their supplies secure, have facilitated the carrying of the wounded to the rear,

and aided towards a general appearance of the cavalry on the scene. In short, the never-ending difficulty of the crowded bridge at Sadowa would have been obviated. It is altogether incredible, considering the number of pioneers that were on the spot, that the idea was never entertained of constructing these bridges. But the official account does not mention that such an operation was ever proposed, much less attempted. This omission, however, might have been most disastrous to the troops which advanced, had they been obliged to retreat, a contingency which ought always to be taken into the reckoning. Swollen water and swampy banks cannot possibly justify the omission; for we should then be tempted to ask, for what purpose are the pioneers, if they are unable to build a bridge over a swollen river? for were the water low, no bridge would be required.

Precisely similar circumstances appear if we turn to the Elbe army. The defiling through Mechanitz was brought to a stand, because the head of the column of the sixteenth division alone was four hours and a half about it. It is difficult to believe that in that time a second passage could not have been established, even if only for the infantry, which would then have enabled the division to take a more decisive part in the action.

If we take a review of the battles of the campaign in this point of view, we shall find that there were frequent occasions when the action of the engineers might have been useful. The reasons why that branch of the service was less

active than the other may be found in the remark, that they were both equally in fault. The services of the engineers were so little appreciated that it was not considered worth while to request their co-operation, so that, however willing, they could not take their part in the works. But is it not also a fault in the engineer himself when the tactician and the soldier is subordinated to the mere architect and constructor?

An engineer, who employs all his time in fortifications, exchanges voluntarily the position of a soldier for that of an artisan. An engineer, who is a good soldier and an indifferent architect, will always be serviceable, even though his constructions may in a measure fail in an artistic point of view. An indifferent construction at the right place is better than an artistic work at the wrong one. The great importance of the commanding engineer in an army can only be appreciated when we see him at the side of the General Commanding-in-Chief, superintending the whole strategic and tactical position, and seizing the opportunity when his own branch of the service can advantageously and actively operate in the battle. The actual carrying out of the work may always be left to subordinates: details easily confuse.

The next campaign will show us this fourth arm acting in rivalry with the others in the battle.

CHAPTER XIII.

In the foregoing chapters we have endeavoured to explain how the mutual action of the different arms did not always fulfil just tactical principles in the battles of the Campaign of 1866. We have further tried to show how the excellence of the infantry, and the superiority of its arm, together with a determined and circumspect leading, compensated entirely for all these disadvantages. In an examination of these infantry tactics, as they were developed by the peculiarity of the troops and the properties of their arm, we may see that they contain not only the elements of victory, but also especially the germs of defeat, if the proper limits are overstepped.

In the almost uninterrupted course of victory in this campaign, we can only point to two failures, at Trautenau and Langensalza, and we feel convinced that a critical examination of these two battles must reveal the weak point. Such a task is not only instructive and useful, but it is also a duty towards those on whose shoulders the responsibility will rest of commanding troops in future battles.

The reason is very easily explained why we avoid as much as possible entering into these difficult questions. Consideration for the reputation of many excellent persons, whom we ought not and do not wish to injure, restrict so sensibly

a judgment which we wish to be free and unbiassed, that, for the present at least, a truly instructive view, a free statement of reasons and actions, might by many persons be considered impracticable. But the times are serious, and render a most earnest examination imperative. The facts themselves cannot be denied: they belong to history. Of what use could it be if we were to be obstinately silent concerning them? Even were we to attempt to cast the mantle of oblivion over them, it would only deceive men of little discernment, who perhaps might not be able to see through it. But those of better judgment would rend it away, and the bitter criticism of enmity would be the more severe, inasmuch as it would have just grounds for its strictures. By silence, moreover, we rob ourselves of an important means of instruction, which is another very great disadvantage. Wherever there is action, there also a cause is always to be found, and when the question is a lost battle, it is not difficult to see that there must have been an error somewhere. Disgrace, however, only attaches to those leaders or troops who can be accused of misbehaviour and cowardice. If, however, the cause of failure lies in another direction, for instance in a faulty leading, it is certainly very painful for those concerned, but not dishonourable.

Such things are purposely kept in semi-obscurity, in which the outlines are only seen indistinctly. No one is accused; of course it was only a series of misunderstandings, and we hear the

softly whispered suggestion that the troops engaged were not to be compared with the rest. That posterity will hereafter come to a proper conclusion is a very poor consolation. The living also have their rights.

To be able to ascertain how far the unfortunate result of a battle can be ascribed to tactical errors, it is necessary to give a picture of the fight drawn in broad lines both as to causes and effects.

CHAPTER XIV.

We will now take into our consideration the affair at Trautenau. In the foregoing chapters occasion has been taken several times to refer to individual episodes of this action. The official accounts describe it in broad characters, and we premise that all are well acquainted with these.

At the very beginning of the action a misunderstanding arose. On the 27th the two divisions advanced on Trautenau by the roads of Lebau and Schomberg. To the first division was assigned in orders, the occupying of the defile of Trautenau; in consequence of which the officer commanding the second division, which by chance arrived two hours before the first, did not consider it his duty to occupy it, and therefore waited till the first arrived, which it did at nearly the same time as the Austrian brigade Mondel, from the opposite direction.

Notwithstanding this, it did not follow that the

misunderstanding should necessarily be attended with serious consequences. The engagement commenced. Our aim was to hurl back this Austrian brigade, and then to march and occupy Arnau with the whole corps, according to orders. The *avant garde*, seven battalions strong, engaged on the right wing, to the south and south-west of the town, the eight battalions of the second division were directed to the hills on the east of the town. Thus there still remained ten disposable battalions.

The mode in which the individual companies of the *avant garde* were placed in the line of battle according to the official account involves the most serious considerations. It would be well to examine whether such an intricate mixing up of the troops, such a departure from the *ordre de bataille* of the first formation as was here practised without any reason, might not have been avoided; this we say notwithstanding our assertion in a former chapter that in the course of a battle the strict observance of the order of battle is often only possible at the expense of its success.

The choice of the eight battalions of the second division from the centre, as well as the manner and character of their leading in action, necessarily had the effect of rendering all united action impossible.

About three o'clock the object of the action was gained, and the Austrian brigade beaten back in the direction of New Rognitz. The troops thought that the affair was at an end. The officer com-

manding, who had remained in the town, had not till this moment attached much importance to the engagement. His view was to continue the march to Arnau, according to his orders. The *avant garde* had assembled in the town; the ten battalions of infantry, which were not engaged, and the whole of the cavalry and artillery, were to the eastward of the town in the valley of the Aupa. The eight battalions alone of the second division deployed in a thin line more than 2,000 paces long, proceeding over broken ground, often fell into disorder; and at length found themselves between Hohenbruck and Alt-Rognitz, 2,000 paces to the southward of the town, and cut off from it by steep mountains, difficult of access, so that an engagement might have happened without being at all noticed by those in the town. They had neither cavalry nor artillery with them.

About half-past four o'clock, Gablentz, with three brigades, approaching in the direction of the western exit of Alt-Rognitz, met these weak lines at the same time that the brigade Mondel sought again to take the offensive on its left.

It is not difficult to see that these eight battalions must have been forced back in the direction of Kriblitz; they were distant some 2,500 paces from that place, the ground was difficult, it was impossible to see any distance over it, and there were no supports. Notwithstanding this, the retreat was very slow, and it was eight o'clock when they reached the heights to the northward of Kriblitz. There they were received by the battalions of the reserve.

The batteries of the second division re-crossed the Aupa, and again formed to the westward of the exit of Parschnitz. They took up a position in columns from the centre, piled arms and waited. Thus they continued for an hour till darkness came on, the rest of the corps also waiting around them; the noise of the fight had died away; then came the word of command: "Stand to your arms! Shoulder arms! Right about face—march!" The retreat had commenced.

Slowly they approached the entrance to the narrow mountain defiles, through a mass of carriages; it took a long time for each corps to join itself on to the long chain. It was now utterly dark; slowly and in silence the columns marched through the defile ten miles long.

But the corps left success, together with its honour, behind at Parschnitz.

What the reasons were that influenced the General commanding to order this retreat, remains a very difficult question.

The repulse of the eight battalions, which, on account of the tactics they adopted, had not the necessary power of resistance, was only indirectly of importance, inasmuch as it necessitated the officer commanding the whole to come to an independent decision, which otherwise would have been spared him.

The official report says:—"The portion of the troops which had retreated, had already taken up their march on the high-road to Parschnitz, which obliged the officer commanding to follow after with the rest."

These " portions " belonged to those eight battalions of the second division, which we have mentioned as having been engaged till eight o'clock in the evening.

The commanding officer of the second division is dead. The expression " portions " is a very vague one; certainly it could only have been small ones, broken-up subdivisions, or companies at the most. The body of the division was at Parschnitz. The ground was not of a nature to permit the troops falling out, and melting away out of the hands of their officers. The whole of the troops were obliged to work themselves through the two long defiles. Late at night some of the troops were still waiting at the entrance. But even if it is admitted that an important part of the division—perhaps half, six battalions—had already, at eight o'clock, got so far to the rear that their recall was beyond the reach of possibility, still there remained nineteen battalions with the officer commanding, as well as the whole of the cavalry and artillery. And yet with these he felt obliged to retire through the defile.

But still this night march in the narrow defile showed that the old Prussian spirit of discipline and obedience was not extinct. No part of the army was put to so severe a test as the first army corps on that night.

From this time forward a dark shadow seemed to hang over this corps. It felt that it had a something to retrieve, for which it had not itself to blame. Fortune seemed inclined to favour it.

This corps, on the morning of the 3rd, was the nearest body of the second army to the enemy. Was an opportunity intentionally offered it of retrieving the 27th of July; or was it a happy accident, that it received at an early hour the direct order to engage according to the commanding officer's judgment? But for two long hours the troops, in a state of feverish excitement, listened in their bivouacs to the distant thunder of the cannon. At last came the word of command, "Stand to your arms! Shoulder arms! Take ground to your left—march!" The corps arrived just as the battle was ended!

If afterwards a painful expression might be discerned in the countenances of this corps, does the fact require explanation?

CHAPTER XV.

As for the other unfortunate affair of Langensalza, it appears at first sight that no explanation is necessary: that it was the numerical superiority and not the tactics of the enemy that caused the result. But this, however, is not the case. This action affords a most instructive example of the weak point in our tactics.

It was quite correct in General Fliess to attack the Hanoverians on the 27th, notwithstanding their great superiority in numbers. It may be objected that, had he only waited one day longer,

he would have been joined by a superior force, which would have rendered the results certain; or, perhaps, have avoided any fighting at all. But during this one day the Hanoverians might have made a movement to the northward or eastward, which was the very thing that under the circumstances we were bound to prevent. We had already been too long groping about in uncertainty not to wish to bring the thing to a conclusion, cost what it might; time pressed, the Hanoverians must be held fast at Langensalza, or pushed towards the south.

A bare appearance before the front of the Hanoverian position would not have accomplished this purpose. On the contrary, from the indecision which they had up to this time evinced, it would have been reasonable to suppose that they would have withdrawn towards the north in order to avoid a collision. Probably we should have obtained the same results, had we been able to sustain a prolonged battle with less numerous troops. If it was necessary to compel the Hanoverians to retain their position, there was only one way to do so, and that was, by means of an energetic attack, to force their whole line to a serious engagement.

But the Prussian General must have been fully convinced that, with such conditions of strength, he could never think of gaining the victory over the Hanoverians. The utmost in his power was to keep them back on the Unstrut, and thus make a drawn battle. But even if the Hanoverians should take the offensive, and force him to retire on Gotha,

this retreat would be far from a lost battle; it would, on the contrary, be a solution of his problem, and thus really a victory. The principal point of view of the Prussian General, throughout the battle, should have been, not to allow the retreat, which he foresaw, to degenerate into a tactical defeat.

If the situation had been properly understood, a strong line of distinction ought to have been drawn between the main body, which should have attacked the enemy with energy, and a strong reserve posted within reach of the battle, towards the rear, with special orders not to take part in the fight, either partially or generally, but to reserve itself for the one purpose of forming a rallying-point, behind which an orderly retreat might have been made along the left road to Gotha.

But the battle really showed a very different aspect from this in its formation, and the reserve was quite unsuitable to these requirements. After a short time, not only the advanced guard, and the main body, but also a part of the weak reserve was engaged in the first line, and the companies were all mixed up one with another in the greatest confusion. Without the slightest necessity one company after another was hurled into the chaos of the fight. Very soon all were swallowed up in the front line, and thus all power of movement was lost. All the guns were engaged in front. This could not have been done with the intention of silencing the Hanoverian fire, and thus preparing an attack for the infantry. The only pur-

pose which could be proposed was, the drawing off the fire of the enemy's artillery from the engaged troops. But for this, one half the number of guns would have been sufficient, the rest were imperatively required for the reserve. But further than this, from the small *corps d'armée* three companies were detached half a mile (German) on the left flank, for a service which could have been efficiently performed by a squadron, while the weak cavalry was posted in the first line in the rear of the centre.

When the Hanoverians at length attacked these weak lines with superior force, that happened which was inevitable—they were broken, and their component parts driven back. No reserve was at hand, and thus any rallying was impossible. The case was nearly the same as that of Trautenau, and the position of the forces was of a similar nature. This example proves in a very evident manner, like the other, that a deployed line, long exposed to fire, has not sufficient power in itself to resist a vigorous attack, and that it can only prevail by having a strong reserve under the immediate command of the General-in-Chief, in a defensive position in the rear, which will serve to rally the beaten troops, and break the shock of the enemy's columns.

If, however, we take a lesson from these two actions, we shall not have paid too dearly for our experience.

CHAPTER XVI.

HERE, then, we close this tactical retrospect. What we have said may suffice to fix attention on those points which are worth noticing. Possibly we may have been mistaken in some of the details, but we only attach importance to the general ideas which may be traced throughout our remarks. If these should be just, the unimportant details of the points mooted, although not exactly correct, certainly cannot make the whole false. There are some, perhaps, who may think us to blame for having here spoken openly of circumstances, the truth of which has hitherto been concealed from the public eye. In all classes of society there are, no doubt, questions which should not be brought to open discussion, and which we endeavour to bear and cure in secret; but matters belonging to the history of battles cannot be comprised in this category. Battles cannot be fought secretly. What possible purpose would it serve to hide errors which one day by a signal defeat may be revealed, most intelligibly, to the whole world? But it may be replied that an individual opinion, which is not infallible, may, by spreading false views, do as much harm as it would otherwise do good were its views correct, and thus, to obviate all danger, all individual views should be suppressed. We do not subscribe to this doctrine. He who thinks that he is able to speak the truth usefully, is justified in so doing. He knows his own responsibility.

But it may also be urged, the time is not yet come to publish these things. When, then, will the time come? When those on whom, perhaps, now, an undeserved reproach is cast are dead; when it will probably be too late to profit by the experiences which we have gained. The time has always arrived to speak the truth.

The present times are much too momentous to be regarded with indifference. What turn political combinations will take, whether for war or peace, no man can foretell. The course of events often deceives the most clear sighted speculations. But when a danger threatens, is it wise to say—"Oh, it will not happen, or at any rate not yet?" The war which may break out will be a most serious matter for the soldier. He can and will meet it with the fullest confidence in his powers, which have been already proved. Nevertheless, the most absolute self-examination is necessary. Our army has to thank the circumstance of its earnest training at home for its success up to the present time. In the future it will be far from boasting: "We have attained perfection," when it is only in the endeavour to reach it that the essence of a healthy life consists.

One conclusion, however, may be drawn from what we have hitherto advanced. In the wars of the future, the decisive element will not be brute force, but rather intellect (*geist*), not only on the part of the leader, but from him down to the last soldier, and each individual will weigh in the scale according to the whole value of his intellectual

individuality. A battle between two armies is nothing more than a struggle between two nations who put forth their best powers to defend that which is most sacred to them; and so long as a nation keeps to the true principles which lead the civilization of man forward in the path of progress, its armies can never be beaten.

NOTE BY THE TRANSLATOR.

Trautenau is a town with the river Aupa running past it, several heights command it, and it forms a very strong position.

The Prussians were advancing on the side of the town on which the river flows, the Austrians were posted in the opposite direction, and of course their object was to arrest the advance of their opponents. In fact, it was a question which should first occupy the town.

The first army corps of the Prussians was bivouacked among the hills, one march distant, and they received orders to occupy Trautenau.

They marched in two principal columns, the right and the left. In orders, the right column was detailed to occupy the town as early as possible.

It however happened that the left column arrived first, at 8 A.M., and, finding that the right had not come up, its commanding officers thought proper to wait, as the other column had been ordered to occupy the town.

But the right column had been delayed from some cause, and did not arrive till 10 o'clock; these two hours made all the difference, for when they at last came up, they found that part of an Austrian corps had, in a measure, forestalled them, and that the heights commanding the town on the south were in possession of the brigade Mondel.

It is impossible, without knowing the exact words of the orders which were given, to say on whose shoulders the blame rests for this misunderstanding.

In his able pamphlet on "Responsibility in War," the Archduke Albrecht remarks:—"In short, every subordinate should, as

much as is necessary, be made acquainted with the purport of the orders that are given him ; a certain independence, in so far as it does not interfere with the harmonious co-operation of the whole, should be allowed him for the execution of his orders, and he should be made responsible for its exercise." *

Now the question is, was the officer commanding the left column acquainted with the general object of the officer commanding the corps, when he received his order to march on the town? For it is possible that, had he occupied the town and the heights commanding it, at 8 A.M., as soon as he arrived, the fortune of the day might have been changed.

If he was not thus informed, the responsibility certainly rests with the officer commanding the first army corps ; but also the officer of the left column, had he been a first-class officer, should have seen how matters stood, and have occupied the town and heights on his own responsibility, as he must have known that it would be some time before the right column would arrive, and the great importance of its possession must have been sufficiently obvious. But, then, what makes a first-class officer? God makes him, "Nascitur non fit." H. A. O.

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* "Responsibility in War," p. 25. Williams and Norgate.

FINIS.

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SECOND EDITION.]

(AUTHORISED TRANSLATION.)

ON THE

PRUSSIAN INFANTRY

1869.

TRANSLATED FROM THE GERMAN,

BY

COLONEL HENRY AIMÉ OUVRY, C.B.,

(LATE 9TH LANCERS.)

Ars enim bellandi, si non præluditur, cum necessaria fuerit non habetur. Animos subito ad arma non erigunt, nisi qui se ad ipsa idoneos, præmissa exercitatione, confidunt.—CASSIOD.

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TRANSLATOR'S PREFACE.

WHATEVER verdict may be passed upon the merits of the "Prussian Infantry," it certainly will not be *Materiam superabat opus*. The very careless and obscure style in which it is written has rendered the translation of many passages a work of great difficulty, not to say uncertainty; but it is hoped that the ideas of the Author have been made sufficiently intelligible to the English reader.

The Translator has been urged from several quarters to give his own ideas as to the application of the questions mooted in this *brochure*, and in the "Tactical Retrospect," towards a reform in our own Army, but there are already so many Army reformers in the field, each with his pet specific, that one more, from a person utterly without influence, certainly could answer no good purpose.

But although declining to enter into the question of Army Reform, the Translator thinks that it may be of benefit to point out the merits of the concluding chapter of the "Prussian Infantry." Inefficient officers, our Author states, are a proof that a State has not that soundness of constitution which would enable it to eliminate the decayed matter. If there should be any truth in this remark,

may it not be worthy of consideration, whether a State can be called healthy which possesses an army which is officered on the principle of a Joint Stock Company,* with Directors in the shape of Secretaries of State for War, who are not guided by those rules of equity which are imperative on those of all other companies of a like nature? That such is unhappily the case, the following will, it is thought, sufficiently show.

1. An officer purchases a full-pay commission with certain pay attached to it, say he gives £1,000, and that the pay is 10s. a day. After serving some time the Secretary of State places him on half-pay, against his will; now the value of the half-pay commission is £500, and the pay is 5s. The officer says, Pay me my £500; when he receives a polite letter from the War Office, in which the Secretary of State acquaints him that he has no fund at his disposal, and refuses to pay him a farthing. But this is not all; although the sum he gives is £1,000, this only represents the Regulation, the unfortunate officer has been obliged to give another £1,000 for *over* Regulation, all which is lost by the arbitrary act of the authorities in placing him on half-pay. These sums are merely suppositious, in order to render the explanation clear. Can a State be considered

* The Joint Stock Company is not so much complained of; it has its advantages. Those who are destroying it are the high authorities, who have set all rules of justice and equity at defiance.

healthy in which a transaction of this kind can be the recognised practice?

Case 2. An officer purchases a commission for, say £4,500, he serves twenty-five years and retires on half-pay,—he dies. The Secretary of State seizes on the whole of this little sum, perhaps his all, and palms his wife and children off, if he has any, on a small pension, that is, he robs the widow and orphan of the pittance which would perhaps have made her comfortable for life, and placed the children out in the world; can a State be called healthy when it permits such a deplorable abuse of power?

By a continuance of this systematic robbery the War Office accumulated a large fund, and with regard to its application, or rather misapplication, the evidence is very complete. Mr. Clode, in his most able and exhaustive work, "The Military Forces of the Crown," thus puts it:—

"The purchasing officers of the line have done more than provide a retirement for *non-purchasing* officers of their own branch of the service, they have given a retirement to officers of *the non-purchase corps* and to others who have *never been contributors*.

"Their fund has been diminished on several occasions by direct payments to the *Exchequer*, and by indirect payments to the *same account*, that is, by buying up the commissions of officers whose half-pay then ceased to be a charge on the Treasury."

To complete the matter, the following Horse Guards Circulars, issued from the office of his Royal

Highness the Field-Marshal Commanding in Chief, will show how the officers' fund has been plundered to reform the household of her Gracious Majesty the Queen :—

"No. 1.—*Horse Guards Circular.*

"25th May, 1861.

"Her Majesty having been pleased to approve of a reorganisation of the Corps of Gentlemen-at-Arms, the purchase of commissions is to cease, *compensation being made to existing interests from the reserve fund by the Secretary of State for War.*"

That is, from the reserve fund supplied from the private resources of the purchase officers!

"No. 2.—*Horse Guards Circular.*

"6th August, 1861.

"The Queen has been pleased to approve that the purchase of the officers' commissions in the Corps of Yeomen of the Guard should cease at the earliest moment possible.

"Any officers who acquired their commissions by purchase, and are desirous of retiring from the corps, on communicating with the captain, *will receive from the Secretary of State for War* an amount in compensation thereof."

Thus it appears that the purchase officer is made a species of "milch cow," good to supply all comers from his fund,—non-purchase corps—Chancellor of the Exchequer—Yeomen of the Guard—Gentlemen-at-Arms, &c. &c., not one of whom ever subscribed one farthing to it, while the purchase officers themselves are frequently denied all compensation from it—their own fund—and which was solely created by themselves.

A legal friend of the Translator, on seeing the above, said laughingly, that he thought the Yeomen of the Guard and Gentlemen-at-Arms' part of the transaction might be explained. Their claim may have been considered to have come under an old due, which certainly he, as a lawyer, should have said was no longer in the Statute-book, viz. *Aurum Reginæ*, concerning which, and to enlighten my ignorance on legal matters, he related the following case from the good old times:—

"A poor wretch having been compelled to embrace the Duke of Exeter's daughter, found the agony so great that, in order to escape from her fond endearments, he accused a certain Sir Thomas Cooke of high treason. Sir Thomas was thrown into prison, but he found means of completely proving his innocence, and his accuser having admitted that he had merely accused him in order to escape the very unpleasant flirtation of the aforesaid young lady, he was only fined £8,000 for misprision. But being known to be rich, he was still kept in custody until he had satisfied an extortionate demand from the Queen for what was called *Aurum Reginæ*, an old due which entitled her to claim 100 marks for every thousand which the King had obtained from him. Thus the poor fellow was obliged to make terms with the Queen also, and he was then let out of prison; but on going home he found that, during his imprisonment, his houses and lands had been stripped bare of all that could be carried off by the servants

of Lord Rivers and Sir John Fagge, the Treasurer and Sub-Treasurer of England."

These, however, were the days of tyranny in England. We, it is hoped, live under more equitable rulers now, and we are told in the leading journal—

"If any one has a grievance now-a-days, he can be quite certain of getting a hearing for it; and if there is anything in his complaint, the public attention will be called to it by means far more efficacious than the presentation of a petition to Parliament."—*Times*, August 8th, 1867.

Let us hope that the *Times* is right.

But these are local matters, it may be said, affecting only a very few; but there is another and far more important point by which the healthiness of the State may be tested, and which has a most direct relation with the Military element, and that is the *Land* question.* In his last speech Cobden said: "Divorce from the soil is a national disgrace and a calamity." Now, as the people are, it may be said, utterly divorced from the soil, how can England be said to be in a healthy state of development? And if what our Author says be true, that efficient officers are essentially the expression of the nation; and if it be necessary that the soldier of the present day should be of a superior character, and intelligent,

* Preparing for publication by the Translator, "Ueber die mittelalterliche Feldgemeinschaft und die Einhegungen des sechszehnten Jahrhunderts in England," by Professor Nasse, in which the Land question is fully explained.

most certainly the purchase system is not the way to obtain the former, or enlisting recruits from the dregs of the people at Whitechapel the latter.

Some short time before the present war broke out, the Translator received from Berlin, through the Prussian Embassy, a reply to the two pamphlets "Tactical Retrospect," and "The Prussian Infantry," entitled "A Retrospect on the Tactical Retrospect," and a reply to the pamphlet on the "Prussian Infantry of 1869," by Bronsart von Schellendorf, a Lieutenant-Colonel on the Staff of the Prussian Army.

The *Edinburgh Review*, in an article in which the translation of the "Tactical Retrospect" is reviewed, asserts that the above emanates from Count Moltke. Be that as it may,* there can be no doubt that the reply succeeds in fixing on the Author several contradictions, and some errors. The Translator has read it attentively, and can plainly see from the tone in which it is written, that the two above-mentioned pamphlets must have given very great offence to the higher Prussian military authorities. This is to be regretted, though very natural; the unknown Author is certainly *sans gêne*, and speaks his mind bluntly, but all must admit that much may be learnt from what is to be found in the two pamphlets. The translation of the "Tactical Retrospect" has now

* Since this Preface has been written, the Translator has received confirmation that the tactical part of the above pamphlet is by Count Moltke.—Tr.

gone to a second edition, and if his brother-officers have found in that, or should find in this, anything which may be instructive and useful, the purpose of the Translator will be fully answered.

But although it is not the intention of the Translator to enter into any details concerning the Army Reform question, a few general remarks perhaps may not be considered to be out of place at the head of a pamphlet of this nature, especially with regard to the last chapter.

In the first place, before any reforms are undertaken, the question of the kind of men of which our army should be composed must be taken into consideration; and before we go further, it would be as well to recollect the words of a monarch of world-wide celebrity, viz. his Majesty the King of the Brobdingnag:—

"Above all, his Majesty was annoyed to hear me talk of a mercenary standing army, in the midst of peace and amongst a free people. He said, if we were governed by our own free will, in the persons of our representatives, he could not imagine of whom we were afraid, or against whom we were to fight, and would hear my opinion whether a man's private house might not be better defended by himself, his children, and family, than by half a dozen rascals picked up at a venture in the streets."

Officers and soldiers should be the expression of the united moral and physical power of the nation, and when this is not the case, no army can be said to have a sound constitution.

The world is now entering into a new epoch of progress, and it would be well if the country were to

consider whether enlisting in the army the dregs of the people at Whitechapel is the proper way of obtaining the right kind of men, that is, men answering to the requirements of the present time.

The following case, which occurred only a few days ago, will sufficiently show the style of recruits which are now in the course of enlistment :—

"WESTMINSTER.—*Samuel Stagman* and *Robert Reid*, natives of Whitechapel, were charged with obtaining 3s. 8d. each from her Majesty, with intent to defraud, and further with refusing to go before a justice to be attested to serve in her Majesty's Regiment of Rifle Brigade.

"Edward Wynn, sergeant, First Battalion, Rifle Brigade, said he was a recruiting sergeant. On the 29th of September the two prisoners came to the depôt in King Street, Westminster, and offered themselves for the Rifle Brigade. He duly enlisted them, giving them 1s. each, and the following morning they went before the doctor and passed; he then gave them two days' pay, less a penny for barrack damages, and on the following morning, October 1st, he brought them to this court to be attested. Upon the question, 'Have you any objection to make to the manner of your enlistment?' being put, they told Mr. Morgan, the office-keeper, they were out of work when they joined, and now had work, and would sooner do six weeks' hard labour, the period a similar defaulter had been sentenced to, than be '*lagged*' for twelve years, the time they had agreed to serve in the army. The adjutant gave them ninety-six hours to pay the 'smart-money,' releasing them, and they failed to do so. This system was common, after obtaining the enlistment-money and some pay as soldiers.

"They said they would be attested now.

"Mr. Woolrych said it was too late, and sentenced them each to a month's hard labour as rogues and vagabonds.

"They thanked his worship, and jauntily left the dock."

Rogues and vagabonds!! And the defence of the country is to be entrusted to men of this kind, and here we see what fully explains the public notice at

the Royal Arsenal, that all soldiers are to be *searched* who work in the establishment, the same as civilians. Let us only consider what would be the effect of an order to search Prussian soldiers employed on Government property. It may be urged that it was of such material that our armies were made which have always conquered in the Peninsula and elsewhere; but how were they kept in order? Will public opinion in the present day sanction the resort to those degrading punishments by which alone such men can be kept in proper order in the field? These things are now nearly forgotten, but it is easy to refer to punishment-books of the period; take for example the court-martial book of one regiment only —a distinguished cavalry regiment—now before the Translator, and it appears that in eighteen months, about the year 1813-14,—126 men were sentenced to receive 36,000 lashes!!

No! such men as these will no longer suit an army of the present day. If intelligent men, of good moral character, are not to be procured, the state of the nation is unsound, and, when the day of trial comes, will be found to be like France at the present time—unable to rise to the occasion.

H. A. OUVRY.

2, Bryanston Street, Portman Square,
October, 1870.

PREFACE.

We trust that we shall not be taxed with presumption in having ventured to advance our individual opinion on the Prussian Infantry in the following pages, which have been written in the interest of that arm. We live in an age of transition, in which the old forms have become too narrow for the new spirit. All seek after novelty; and if there be any hesitation as to a hasty decision, it is from a fear of confining the inquiring spirit too soon in forms and regulations, which being once fixed will prevent the free exercise of subjective opinion. But such irresolution has a tendency to confuse the mind; for while the older soldier can depend upon his more cautious judgment, the younger one will find himself astray, having no firm basis to rest upon, so that all which he has scarcely acquired will have become labour in vain—and the greater part of our Army is composed of young soldiers.

To contribute a stone to this new edifice is the object of our treatise. That it should contain truths and novelties alone, can scarcely be demanded by any, but if it should be the means of causing one vital idea to enter into the soul of the Army, we shall consider that alone as a sufficient recompense.

Perhaps in the following pages, in more places than one, a tone is adopted and *ex cathedrâ* opinions are enunciated which may lead to a conclusion that the Author considers his opinion to be the only true one, in opposition to which no contradiction will be tolerated. This we must justify—not, however, in deference to the critics, for we well understand that, although criticism is a power, it does not necessarily follow that every critic is all-powerful, and we know too well that a critic, wounded in his vanity or other tender point, is pitiless, and never respects those limits on which all free and pleasant social intercourse depends. But we will justify this tone towards those for whom we write, in order that they may not ascribe to arrogance that which is in fact the result of a calmly-formed judgment, at which we have arrived after a most laborious research.

We once received this piece of advice from a sage: if, said he, you wish to convince any one of the justness of your views, however much you

may be yourself convinced of their irrefragibility, never say that such *must* be the case, and that it is impossible that it can be otherwise, for then your opponent will be offended and will contradict you from a very pardonable feeling of *amour propre*, but on the contrary always say, "I dare say that it is so," "it may very possibly be so," or "it can be so," he will then unconsciously fall into your way of thinking, and will finally adopt your conclusions, without perceiving the extrinsic influence which has operated on his mind. And further, my friend also advised,—if you have ever written anything, read it carefully through from beginning to end, and ruthlessly strike out every superlative you may find.

We have since endeavoured to follow this advice, but we have found out that goodwill alone is not sufficient for its accomplishment; there is a talent required for all things, and we are afraid we are not apt scholars of so wise a master. In a certain measure we have followed it, and the "mays" and the "cans" which follow are the fruits of it; but the "musts" and the "shalls" are still very plain notwithstanding. Nature asserts its rights, and violently rends asunder all these artificial glosses of politeness.*

* "Naturam expelles furca, tamen usque recurret."—Tr.

Where views are expressed, and laid down as accurate and decided, it does not follow that others are prevented from exercising their judgment. Such expressions merely imply that the writer has maturely considered the matter, and has come to a decision which he cannot alter until he sees good grounds of sufficient weight to convince him that he may be mistaken. There always remains one subjective truth only — no man sees things as they really are, but each through the medium of his individual character. If in a council of experienced men the views of any particular person are rejected, it is not because such views are unwise in themselves, but because those views only are of practical value which suit the generality, and which are not subjectively too deeply coloured.

We therefore advance our present opinions, hoping that they may prove useful, but at the same time not feeling any great anxiety as to the possibility of their being rejected.

We have written according to our conscience, and in the faith that it will benefit the Army, without intending to injure any one.

In the decline of a nation the agitation of doubtful points should be strongly denounced, as it might bring weak spots to light and cause a rent in the whole texture; but in a State marching

forward towards a future, such a course may perhaps tend to cure faults, and thus be a warrant for its sound and perfect health.

NOTE.—In this translation, which is as literal as possible, the paragraphs and sentences of the original have been preserved; which of course interferes very much with smoothness of the reading.

Everybody who is acquainted with the German language must be aware that, in translating it into English, it is frequently necessary to make one sentence out of three or four of the original, and wholly to remould it in order to make it read well in English; but, in a technical treatise of this kind, such a mode would perhaps sacrifice precision to nicely-rounded periods, and therefore it has been judged more convenient to present it in the most unsophisticated form.

H. A. O.

NOTE.—In order that the English officer may more readily comprehend the allusions to Regiments, Companies, &c. in this treatise, the following is added:—

A company has—

1 captain and 4 subalterns	5
1 sergeant-major, 1 ensign	2
Sergeants	4
Sub-officers (equivalent to corporals)	12
Privates, including 30 lance-corporals	237
Total	250
And the battalion has 250 × 4	1,000
To which add 1 field-officer and 1 subaltern-adjutant	2
Drummer and buglers, including tambour-major	17
Total combatants	1,019
	3
And for a regiment = 3 battalions	3,057
To which add 2 field-officers and 1 adjutant	3
Total 1 regiment =	3,060

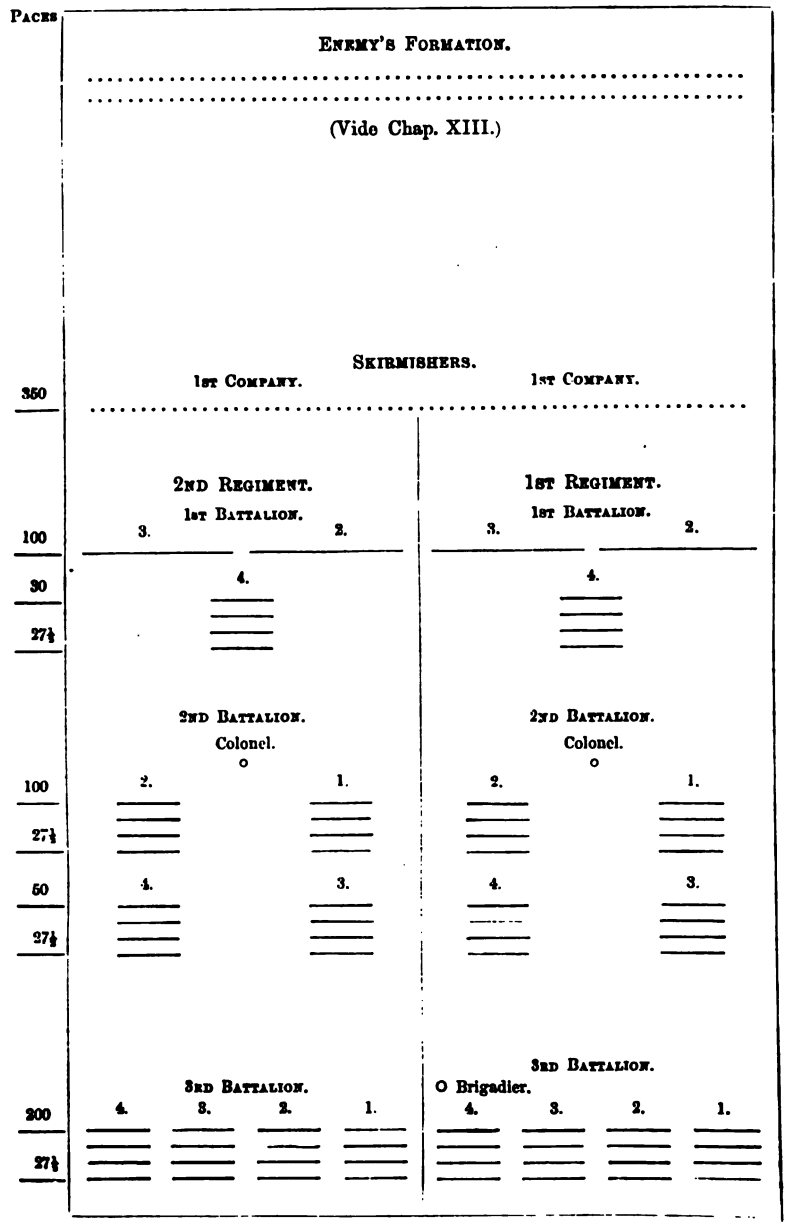
As a general rule, a brigade is equal to 2 regiments.

A division is equal to 2 brigades.

(With cavalry and artillery.)

A *corps d'armée* has, as a rule, 25 battalions, 24 squadrons of cavalry, 96 guns = 25,000 infantry, 3,300 cavalry.—H. A. O.

BATTLE FORMATION OF A BRIGADE OF TWO REGIMENTS.



ON THE PRUSSIAN INFANTRY.

CHAPTER I.

On the fundamental principles for determining tactical forms.

It is pretty generally acknowledged that the new armament of soldiers necessitates a change in tactics: but that a new epoch has arrived, similar to that occasioned by the tactics of the French revolutionary armies, which abolished those of the Seven Years War, is a view which has not become sufficiently general to lead to an acknowledgment of the necessity of a complete reform in our system by abolishing the old forms. It is thought that these may be patched up by additions here and there, so as to suffice for all necessary requirements; and thus, although they have long become obsolete, they are jealously preserved, and sometimes designated "Old Prussian traditions." No doubt it goes against the grain to part with old friends which long custom has transformed into pet children, but by thus seeking to unite the old with the new, an impossible task is forced upon our infantry soldiers, viz., that they shall represent two different centuries in their discipline.

A short comparative examination of the characteristics of the armies of the Seven Years War, the wars of Napoleon, and of the present time, will show how formations, for battle and tactics,

are merely the necessary consequences of the peculiarities of the several armies themselves, and that therefore tactics become obsolete when the element—the soldier—has become essentially changed.

Under Frederick the Great the soldier was carefully formed, by means of a strict discipline and a long period of most painful service; he had no individual patriotism, but much *esprit de corps*; if we add to this element an able and well-educated body of officers, having the most despotic command over their subordinates, and an excellent armament, we have the requisites upon which his tactics were based, viz. a quick well-directed fire from line formations which permitted its greatest development, the whole being favoured by the excellent training and strict discipline which was maintained. But the independent fighting of the soldier was a thing quite out of the question, he had no personal conscience and no individual education. His main value consisted in being attached to the whole body by the chain of the strictest discipline, and for this reason the chosen battlefield was a plain, where alone large regular masses could be moved with effect.

The fundamental tactics of the French armies were of an opposite character, masses numerically great of half-formed soldiers, patriotic and willing, with a natural disposition for the calling which served in the place of a military education; officers who, in comparison with the Prussian, were without authority, or any true military knowledge, and

who were carried on by the mass, whereas in the Seven Years War it was the officer who led the mass ; this, added to an armament of the very worst kind, rendered them incapable of line formations, for none of the men would keep together in the ranks, but would open out loosely in spite of their patriotism and warlike experiences. They were all formed into massive columns, like a herd of cattle driven together, in which the inexperienced or unwilling were hurried on with the rest. Line formations were unnecessary for them in order to obtain the greatest advantages of firing as, on account of the badness of their arm, as well as from their want of instruction in musketry, they could expect nothing thereby : instead of fire tactics, with them it was shock tactics. A trenched and broken ground was generally chosen to favour the action of their columns, and as the necessity here showed itself for individual combats, it was sought to provide for these by troops formed and exercised for that special purpose. But then these combats were also aided by the peculiarly awakened national enthusiasm of each individual.

Now we have the needle-gun, and it will hardly be maintained as some have asserted, in the year 1866 that, excellent as it proved for firing, it was still better for the bayonet. Shock and fire tactics fought for mastery in 1866. The important difference between the present army and that of fifty years ago does not lie externally in the possession of the needle-gun ; they differ essentially in their interior economy. He who

has been in the army that whole period, has not come completely to a perception of the gradual development of the transition of which, without being conscious of it, he has in a measure partaken; he still half believes in the sanctity of the old ways which, although they have long become obsolete, he sees yet vital in the artificially preserved forms.

It requires no small effort in an old soldier, grown grey in fixed views and old traditions, to admit suddenly, that all by which he has risen has now become useless, and that something new and fresh has taken its place; and that only two things are now possible for him, either he must follow the recently manifested power, or sit down spitefully on the smouldering ruins, and think on the good old times.

We have now, as under Frederick the Great, the most carefully educated soldiers, whose individual value is much enhanced by the reform in individual and national ideas. We have a corps of officers who, by an education embracing all points of a military nature, are enabled to have an unconditional command over subordinates, and we have in addition the most perfect armament and admirable instruction in musketry.

How can any one possibly be so shortsighted as to consider that the essence of our tactics should consist in driving together into the mass of a column all these splendidly armed and educated soldiers; and in making this precious power, this intelligence of twenty officers, and weight of 1,000

weapons, absolutely dependent upon the judgment of one commanding officer who would be physically unable to govern the powerful machine, much less to apply it to any useful purpose in the rapid changes and complicated circumstances of a battle?

To lead one of our battalions into action in the normal battle formation, that is, in columns formed on the centre, with its commanding officer at its head, would be like an endeavour to break down a stone wall with a handful of fine surgical instruments; the costly material would be ruined, without the slightest chance of accomplishing the object desired. If it be our object to make the most of the breech-loader, we must so arrange matters that its operation is not paralysed by our own battle formations. We need not fear the consequences.

With our present experiences of 1866 we think it very wonderful that up to that time no foreign Power would believe in the superiority of the breech-loader, or even in the possibility of employing it on service, and yet it is very natural that it should have been so; no one contested the fact that the breech-loader in itself was a very superior weapon, but the cardinal point was, whether the common soldier would be able to attain to that degree of military education, or whether his intelligence could ever become sufficiently developed, to enable him properly to make use of that delicate and dangerous arm. If this could be attained, then certainly the weapon

would be irresistible; but if the soldier should fail, and not be found sufficiently ripe to appreciate it, then it would become ruinous to its bearer. Let any one only picture to himself the continual care, attachment, and intelligence which is required in the common soldier for the mere preservation of the arm, particularly under unfavourable circumstances in the field. Should a most careful instruction in details, and an unremitting attention to interior economy, not be one of the fundamental principles in an army, it is much to be feared that on the day of battle it will find itself in possession of an excellent arm indeed, but one that is quite ruined and unfit for use.

Should the General of the hostile army be acquainted with this weak point, he has merely to refuse battle for some eight days, and then he may hope, particularly if aided by unfavourable weather, to find an army of men who, though very good shots, have only damaged weapons which will not go off. Here we see attention to interior economy in troops coming into relation with strategical conditions. No nation, however, dared put this questionable matter to the test in a great war; but we who knew that our men were ripe to use the arm with effect, had sufficient confidence to employ it, and by that means, or rather by the soldier who used it, we gained an overwhelming advantage, though it was only the intrinsic worth of our army which permitted us to reap the benefit of its use. Whether another army having had occasion from

accidental circumstances to use the breech-loader for the first time in a great war, would have been equally successful, is a very questionable matter. The finer and more complicated the weapon, the greater the difficulty of using it, and thus it depends entirely on the bearer of it, whether all its great advantages are turned to account.

The superiority of the breech-loader does not so much consist in rapidity of fire and the number of missiles discharged, as upon the training and selection of intelligent and independent soldiers who are capable of using it, and thus reaping the advantages of its intrinsic qualities.

Mere drilling will never make such soldiers; they must not merely act at word of command, but according to their own judgment, and of their own accord, which will then operate so that the humblest soldier will become able to take an active part in the battle.

If, from a fear of losing the command over the soldier, this free development and employment of his powers is forbidden, then a voluntary sacrifice is made of the peculiar advantages of the breech-loader. To the officer who is accustomed to an artificial, rigid subordination, this free emancipation of the individual soldier may appear questionable; but the step from our previous tactics to this freedom of action in the soldier, is not so great by far, as that from the close column tactics of Frederick the Great to the independent and unfettered method of fighting by skirmishers. A rigid for-

mality is no doubt the most convenient for the officer; it requires no exertion, and no intellectual superiority on his part. Soldiers thus restricted in their education may be led by the most mechanical and uneducated officer,—he gives the command and the machine obeys; if however the soldier be possessed of a lively will and a spiritual power, a corresponding intellectual elevation and consciousness of superiority must be required in the officer, and this can be founded only on intelligence and character. Many a warm defence of rigid forms and fixed rules has its foundation in a gloomy feeling that, with new times and changes, the old rule will come to an end. It is only officers and soldiers of the highest military cultivation, and who are possessed of a personal and national feeling of consciousness, who are capable of developing the full power of the breech-loader.

If an army should be so fortunate as to possess these precious elements, it should employ them in their fullest integrity; and not endeavour to suppress them as if they were its own enemies, by taking a narrow-minded view, partly drawn from the old lumber closets of history, and partly arising from a mistrust emanating from an idea of its own weakness.

But, for such soldiers as we have described, the column is no fit battle formation; and we hold it for the first axiom of the new tactics that for the future, in action, the formation in column must never be employed.

CHAPTER II.

On the column as a battle formation—The tactical unit.

THE column formed on the centre, especially every deep column, as well as every half-battalion column, and if we go lower in the scale every company column, is not in the first place in a position to reap the advantage of firing, which is the chief *forte* of our infantry. Drawing up, or deploying, occupies so much time, that even if it can be done at all, the moment when it would have been effective will have gone by. It seems beyond the reach of possibility to do it under a hostile fire, and to deploy before coming under fire is to admit that the column is no battle formation.

The idea that the column formation is one ready and prepared for all eventualities, and especially adapted for a bayonet attack, may be at once laid aside. To paralyze the superiority gained by the fire of the breech-loader, by means of a rapid and vigorous assault with the bayonet, is an idea that no doubt is still laid down distinctly in our "green book," and this notwithstanding the decisive lesson which was taught by the Austrian shock tactics.

The effect of pushing forward columns into a breech-loader fire is most clearly illustrated by the Austrian official accounts of the Campaign of 1866, which afford us a most complete and admonitory example. An earnest study of these accounts, which are so instructive in a tactical

point of view, and which are written with the utmost frankness and perspicuity, will we think warrant the conclusion, that the excessive and almost incredible loss of the Austrians was less to be ascribed to the breech-loader fire than to the strange infatuation which guided their tactical formations. Ignoring, in the most inexplicable manner, their daily experiences until the close of the campaign, they always attacked by brigades with massed battalions in close column, or in divisional masses, four battalions in the first, and three in the second line. To oppose them there usually stood clouds of skirmishers, in no particular order, without united leading, and under no particular command, who fired into the heavy advancing masses often by a kind of desperate necessity; and under such circumstances, fire how they would, they were sure to hit, whether they took aim or not.

The most instructive example, which must bring conviction to every mind of the consequences of pushing heavy columns into a breech-loader fire, is afforded by what happened to the first Austrian corps in its last attack upon Chlum, which attacked in the manner that we have described. The troops, 20,000 strong, advanced to the attack in perfect order, and well in the hands of their leaders; in twenty minutes they sustained a loss of 279 officers, 10,000 men, and 23 guns!

Such no doubt would be our own fate were we to attack with a brigade according to the regulations.

The unwieldiness *(schwerfälligkeit)* of the Austrian army was never more apparent than in the fact that in spite of its constant experiences, which rendered matters as clear as the day, it was never able to devise any other expedient in the place of these fatal column formations.

That columns cannot be employed even in a well-sustained muzzle-loader fire is sufficiently shown, among many other instances, by the battalions of the Emperor Francis' regiment at the attack of Rüdersdorf.*

If we steel our minds against the decisive lessons of the Campaign of 1866, what will be the result? Either we must employ the column formation for the battles of the next war, and take the consequences, first, of enormous losses, and secondly, of defeat (for the bravest troops will recoil under sudden and wholesale slaughter), or we must trust to the intelligence of the inferior officers to save us in the hour of battle by ignoring these pernicious forms altogether; and, as new ones are not to be improvised in a moment, by fighting without any at all. The irregular mode of fighting into which our men fell in 1866 was merely the natural consequence of the impossibility of keeping to the regulated forms, and of there being no new ones at hand to replace them.

In the wars of the future, if we would obviate the necessity of every one taking the law into his own hands, forms applicable to the new state of

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* Napoleon's last attack with the old Guard at Waterloo.—Tr.

things must be supplied, and then the leaders will not be forced to act without any at all. However much the generality may agree in the justice of these remarks, still at present the only battle formation which is sanctioned by the regulations is that of battalions in column, and towards this our whole training tends; but before we go further into the subject as to what formation should be adopted for battle in the place of the rejected column, the question of the tactical unit must be first decided.

A tactical unit, as the name indicates, is clearly that unit according to which we reckon in tactics. The idea of "ability to fight independently" has nothing to do with a tactical unit; a battery most certainly, without contradiction, is a tactical unit, but it never is in a position to fight independently. Thus, battles are not fought by tactical units, but they are rather used mechanically to reckon up the troops which we possess in order to fight a battle.

The General-in-Chief reckons up his army by corps and divisions: he cannot know at all times where this or that battalion may happen to be, but he must always be well acquainted with the positions of his divisions, and be able to give an account of them. These are the tactical units for the General-in-Chief by which he reckons up his army for a campaign, and which may therefore be called "strategic units." The General of Division also reckons up his division according to tactical units, in order to play his part in the battle; he dis-

poses of these units alone, though not directly on account of the organisation of the command; but only exceptionally over fragments of them; and he must be in a position at any moment to give an account of their place and position.

The question whether the battalion or the company is the proper tactical unit may be answered by considering this question: Is the General of Division in a position to carry out a fight with forty-eight companies instead of twelve battalions? that is, will he be at all times during the action perfectly certain concerning the position of all these forty-eight companies? The answer must certainly be in the negative; the task would be too much for any head. The battalion, then, is the tactical unit, and not the company.

Perhaps this explanation of the mode of reckoning up forces by means of tactical units may appear too superficial; but in reality it is not so, on the contrary it is rather the foundation of every order of battle. A leader must first of all know where each division of his force is, before he can make his dispositions with regard to the whole. A leader of a *corps d'armée* can, however, reckon his four brigades as units, and dispose of these alone. A General of Division, and still more a Brigadier, can only reckon according to battalions. Regiments are too large among tactical bodies upon which to base all calculations.

A Brigadier who divides his six battalions into two wings of two battalions each, and a reserve of two battalions, does not send his orders direct

to each battalion, but through the channel of officers commanding regiments; and if he wished to inform himself clearly concerning his immediate position, he would not reason with himself thus: "I have still seventeen intact companies, or still an intact regiment at my disposition," but rather, "I have two complete battalions; what can I do with them?"

The notion that the tactical unit is such a body as is within the compass of the voice is derived from totally arbitrary grounds, which by means of another species of tactics, seeks to shelter itself under a mere idea.

If we follow out the consequences of considering the company as a tactical unit, the battalion may, it is true, be regarded as an intermediate organisation; but the invariable union of these four exact companies to form a battalion could not be considered a constant necessity.

A Brigadier, then, works with twenty-four companies, which he distributes at pleasure, and gives the commands according to his judgment among his two commandants of regiments and his six commandants of battalions.

Here such an artificial confusion would exist, even before the battle, that at length no man would be able to know to what he belonged.

The correct combination of troops for a battle must be taught by fixed rules during a peace-time training, in order to render the unavoidable intermingling during action as little dangerous as possible.

The question then here arises, How shall the battalion fight? There can be but one answer:—The battalion fights, without any exception, in four companies, each company under the orders and the direction of the officer commanding the battalion, but never *under his word of command.* This position must be considered and laid down as a further tactical principle.

CHAPTER III.

On present company-column fights—On half-battalions.

Our present tactics, which cannot suppress a certain mistrust against acting with closed columns, allow an option of fighting in company columns, and particularly in small divisions, and in unwatched moments these are employed by preference. But we have not yet arrived at any fixed forms, valid for all occasions. We oscillate rather from one extreme to another, evidently with this view, so that free play is given for each to act according to his own notions.

The battalion either fights as a closed machine, under the direct command of its leader, or it manœuvres in company columns; that is, the companies disperse themselves in all directions "on their own hook" (*auf eigene Faust*), never to reunite again; and the Commandant, in order that he may not have the disappointment of

being left alone, has no other resource than to attach himself to one company and command that, whereby he may perhaps be able to seek some consolation in imagining that he forms a reserve to the other three. As for working together, it is hardly to be thought of. The three separated company-leaders are delighted at last to escape from their usual occupation of riding along as spectators by their battalion, and take care to come back as late as possible. With us, fighting in company columns signifies breaking up the tactical connection of the battalion, and to prevent this the Commandant sees no other conclusive means, than to allow the captains of companies to separate only to such a distance as will effectually prevent any one escaping; but this is simply to renounce the very aim and object of the company column.

It was then thought that the correct proceeding was an intermediate one; but this seldom holds good. Half-battalions were formed, and it was thus hoped that all the advantage was to be gained without any drawback; but this was a serious delusion. The disadvantages are many, without even one corresponding advantage. They however came into favour as formations, especially on field exercise days for regiments. They flattered the commanding officer, who came out as a small brigadier with his six half-battalions, and was enabled to work according to the old cut-and-dry-pattern system, and still think that he was answering all the requirements of the new tactics.

Certainly there was a time in which the formation of half-battalions as a momentary aid had their justification. When, as it happened immediately before the war with five *corps d'armée*, the whole order of battle was founded on half-battalions, this certainly proved the great flexibility of the army. Closed battalions had been rejected, company columns mistrusted, and thus these formations on the spur of the moment appeared sufficiently advantageous. They broke up definitively and purposely the connection of the battalion, and doubled the tactical units. The fortunate result of the battles did not allow the disadvantages to appear. But if now after three years' trial, we cannot think of anything better than these make-shift formations, the disadvantages of which we can plainly perceive, it is certainly a sign of a very uninventive genius.

The drawbacks to the half-battalion consist, in the first place, that such formations have no organic cohesion; it is desirable that a war should necessitate as few new formations as possible, and this was fully taken into consideration in the reorganisation of the army in 1859, and especially that as few alterations as possible should be made in the relation of the commands.

We should fight in the formations with which we have become familar during a long peace service, and the same officers who have formed the soldiers in peace should lead them in war.

The soldier should be pervaded with the idea that the section, company, or battalion to which

he belongs is his home during a battle, a return to which should be the object of his endeavours in case of his having gone astray. And let us just consider the case of a soldier going about in search of the second half-battalion of the first battalion of the Xth Regiment during an action! The conditions of the commands also, those important factors in our battles, would be inverted in the most critical manner. Suppose the officer commanding the battalion takes two companies, and the senior captain the other two, the tactical connection is at once broken, and a slight offered to the officer commanding, which is hardly to be reconciled with a fine soldierly feeling. And even if the tactical connection should be retained, and the superior command rest with the officer commanding, the battalion would be split into two parts, with which he would not know what to do. For this reason perhaps he would lead one division himself, and cause the other to be led. Suppose again, that Nos. 1 and 4 companies were to form one half-battalion, and 2 and 3 the other, and that each of these half-battalions were put under the command of the senior captain in each, then it might happen that a half-battalion would be under the command of a young officer, while a much senior captain, close in the vicinity, would be looking on inactively, which is hardly to be reconciled with military honour. Apportion the half-battalions among the captains according to seniority, and for the most part leaders and soldiers would meet

each other for the first time in action, and the position of the captain who should be one of the most important actors in a fight, riding inactively by the side of the men, would be rendered perfectly deplorable.

For these personal considerations alone the half-battalion should be altogether rejected: to introduce it as an administrative unit in peace, even if it were feasible, would cause a complete revolution in our whole organisation. And if we contemplate, in a purely tactical light, a battalion of 500 men—for a half-battalion would be nothing more—so much more cumbersome a mass it will appear, the less the commandant and men are acquainted with each other. To divide one division into two smaller ones only, is a thing pretty generally repudiated.

The fact of two companies being together in a reserve formation, when the senior officer takes the command, does not make the two companies a half-battalion; their part in the action would not take place together under the command of the senior officer, but quite independently, even though they were working together.

Thus the half-battalion appears to be a mere superficial solution of the problem. The solution, however, cannot be reached by mere forms or combinations, but rather by animating existing ones with the correct spirit. The direction towards which our present tactics should aim, can be no other than to place the officer commanding the battalion in a position to really lead the four com-

panies in action, not merely to be *in* command, to re-establish a constant working together, between him and his four companies, in order to reap all the advantages of an individualised combat, without at the same time falling into the error of an eccentric fight without a plan. To this end, on the one hand, the commander of the battalion should take pains to make himself well acquainted with this mode of combating, and not think, that after a course of exercise in column formation and rank marching, the company-column fights are something to be understood as a matter of course, and that the fault of a failure would lie only in subordinates: on the other hand, regulated definitions should be applied to this mode of combat. If, as in 1866, a dispersion of the companies should manifest itself, the cause in the first place would lie with the officers commanding battalions, who by, or without their own fault, have not fulfilled their essential task, that is, to exercise a control over the fighting of their companies.

CHAPTER IV.

On the formation and education of our army.

We can never be in a position to obtain a real benefit from these formations unless we first give our unconditional sanction to the principle, that the battalion fights exclusively in four companies.

We shall then know how we ought to fight, and can form our peace education after a distinct plan; whereas now we practise in peace that which we *do not* intend to do in war. At one blow the whole of the ballast will fall out of a peace education, which now impedes all our progress, which disunites us in the most varied directions, and operates so that we can do nothing truly efficacious. The whole of our present battalion exercises, column forming and deploying, advancing in line and column—all the tedious and desperate defensive formations would be swept away, and the officer commanding the battalion, freed from the heavy burden of having to exercise all these as matters of importance, would be enabled to direct his emancipated intellect on that which is truly important and decisive.

The view that strict discipline, which is a peculiarity in our army, takes its root in these stiff methodical exercises can scarcely be maintained. Most certainly the stiff external carriage of our army is a necessity, as well as an expression of one of the most essential means of discipline. But external carriage was never given the soldier by battalion drill, but rather specially and solely by company education. The company is the school for the making and instructing in details, and the battalion solely for tactical education. Consequently, it justly follows that this further position may be laid down, "that a battalion formed of four companies executes no movement *in step*, but rather that all movements should take place *out of step*."

Most certainly many a commanding officer, who after unspeakable pains has succeeded in perfecting his battalion in the correct pace of 112, will regard this as a formal revolution; and this no doubt is true, although in fact it is nothing more than an inevitable consequence of our prescribed definition, that "all movements of company columns take place out of step."

It is only by means of this that we shall be enabled to root out a phenomenon, the serious consequences of which we should not conceal from ourselves. We maintain an uncommon rigidity of discipline as long as it appears possible to do so; that is, in garrison, at drill, in manœuvres and evolutions within a certain compass. But the constraint with which all is carried on, causes not only the eye, but also the mind, to acquire bad habits. The soldier accustoms himself to the exterior stamp of discipline, and with the form he adopts the essence; both appear to him to be inseparable. This makes the command easy for the superiors, so easy, indeed, that the least efficient or even the totally inefficient, become capable of commanding, so long as these stiff exterior forms are existing: general habit keeps their heads above water. But from the moment that extrinsic circumstances render this "knack" (*ruck*) no longer possible, a yawning rent shows itself.* Now all

* But from the moment that war takes place, the officer who does not know how to preserve an influence over his subordinates except by means of the rigid forms of discipline, loses his hold over the men, and becomes useless.—Tr.

falls to the ground, not because the object commands it, but because the power has lost its influence. The soldier sees the impotence of his officer, and when the weak superior becomes dependent on the clearer insight of his subordinate the position becomes very dangerous. How many are there who lose the possibility of acting at all, on account of forms by which they had up to that time maintained discipline? But the consequences not only show themselves in great and decisive actions, and particularly in unfortunate catastrophes, but also in the daily occurrences of common life. The soldier endeavours to make the most of every unwillingly-granted moment of indulgence. It occurs to him that his superior is an inefficient tyrant, who torments him so long as it is in his power to do so; he knows that his amusements will be of short endurance, the severe master is always present on his appearance in the barrack-yard. This condition does not lie in personality, but rather in the institution. It will disappear when the soldier knows that as soon as he joins his battalion he may move free and unrestrained. There is, however, no necessity on this account to do away with the parade march, which is held to be so indispensably necessary, and which indeed cannot be undervalued. There is an unmistakeable sign for the adoption of this, and therefore for an assumption of the stiffest carriage, and that is the drum—that marvellous melody which sends forth its trusty notes in every nook an corner, from Memel to the Hohenzollern. The

battalion only marches in step to the band; for when the soldier is on the parade-ground of his company, he is a mere rigid machine, who thinks and acts according to command.

It may appear that we have already adopted this voluntary neglect of forms, since all movements of troops on the field of battle are performed out of step. But this appears to be merely a concession forced upon us by exterior circumstances, notwithstanding which we constantly preserve stiff forms as much as possible. The battalion has not learned this stiff marching according to regulation in a ploughed field, but, on the contrary, by a march performed in the most rigid pace on a parade-ground. No wonder, then, if the officers and men at length come to the conclusion that this eternal exercising must have an object, and that it is a preparation for marching over ploughed ground; and thus they endeavour to put in practice what they have learned on the smooth parade-ground on the rough, ploughed field, and the result is a useless misapplication of mental and bodily power. To march well in battle array out of step, is something very different and much more difficult than to exercise in step. We practise a short subdued pace, because the care for the dressing front rank men, and an elegant bearing of the upper part of the body, appears to us to be of much more consequence than gaining ground rapidly. During the whole of the drill, at which it is instilled into the soldier that he should keep his eye fixed on the nape of the neck of his front rank man and lock

close up, he has plainly no time to look down to his feet in order to take a long step on uneven ground. Besides, as soon as an opportunity occurs, we think it our duty "to draw in the bridle again," that is, by an impressive word of command, to cause the men to get into proper dressing and march at attention, which necessarily occasions a manifest expenditure of bodily as well as mental powers. For this reason we allow things to remain as they are, when we see that endurance has come to an end; but not seldom we see, as many cases prove, that it gives rise to an unbridled looseness, instead of a reasonable unconstraint. The soldier lives in a constant fret against the unreasonable restraint which is imposed upon him. The best of soldiers involuntarily gives way for a moment, and only draws himself up to attention should the eye of the company leader fall upon him. The company leader is the only one the soldier has to fear, as no other knows him personally. The superior officers do not hold the men individually responsible for looseness in the ranks, but the company leader does; and thus his essential, and often only care is, that his company shall not lose its dressing, instead of thinking how he can lead it conformably to the requirements of the combat. If a subdivision has lost its proper touch, or if individual files have lost their dressing, or have become bagged to the rear (*sich gesackt hat*), to use the classical expression, it is a far weightier matter for the leader than the appearance of a company

of the enemy. In the first case he will be pitched into without mercy before his whole company, and told that his subdivision is in fault; an error of the last kind would be scarcely remarked, or at most casually mentioned in the criticism, and then immediately, as a kind of balsam, the excellent bearing of the men would be praised.

This picture is not exaggerated. Most certainly the necessity of the external military carriage of troops should not for a moment be ignored, but this can never be the only aim. We must develop the soldier through a strict setting up, to a free unconstraint, which can alone warrant an employment of his mental and bodily powers conformably to the purpose in view.

For this reason we must not lose sight of that which appertains to the parade. An efficient body of troops will always strive to mark its efficiency by externals. But the question is, what is conformable to parade. A hundred years ago the head of the soldier was powdered white, and a pair of black moustaches was painted on his face, because such an uniformity was considered conformable to parade. Seventy years ago the wood was cut away under the rings on the firelocks, in order that they might make a clatter at manual exercise; this also was conformable to parade. But we are now much more reasonable. Troops are no longer required to evince their efficiency by the outward uniformity of all kinds of trifles, but rather by a proud confident bearing. It is now no longer necessary that the arm-rings

shall glisten, if only the eyes do so. Many old reminiscences, however, are still preserved. There are many old soldiers with whom the bent-forward position at presenting arms appears to be a greater calamity than the bent barrel of a firelock.

Our exercise time is expensive, and becomes more so from year to year. It is true that we have nominally a three years' service, but really for the greater part of the men it is only one of two years. In this wholly insufficient time we form in the first place a battalion with such infinite pains, that all is hurry-scurry (*klippt und klappt*) till the inspection. At the inspection praise and blame is measured out, according to how much of the drill-sergeant is in the nature and education of the officer in command. Accordingly, as this inspection turns out, the battalion, and thus its commander, is good or bad. When the inspection is over, this reflection occurs, "all that has hitherto been practised was done with a view to the inspection, and the purpose has been answered; now we must work in quite another direction, and endeavour as much as possible to forget all that has hitherto been done."

That we can, finally, do anything efficiently under this Sisyphus-like task, is only due to the truly feverish activity and zeal of the instructors who make the army. But the best talent must be consumed by such work, and all mental freshness soon destroyed. When the army is formed and ready for war, those who have made it and whose business it should be to lead it against

the enemy, are "used up." They have been obliged to work at an impossible task, they have done all they could, and they have paid for it with the loss of every ideal aspiration, every free emotion of the mind. Here is a point on which lies a question with regard to the army of—to be, or not to be. For this reason,—away with all pernicious superfluities in our formations: it is the highest time.

CHAPTER V.

The duties of officers commanding companies, and the higher leaders.

We have remarked above, that the four companies of the battalion should always fight independently, and that to the officer commanding is assigned the difficult task of securing a united reciprocal action of these separate bodies by his arrangements and leading. The influence of the officer commanding should not be exercised directly on the soldiers, but exclusively through his four captains commanding companies, who alone should work directly on the men. A tactical employment of this nature responds completely to the principles on which the education and formation of our army rests. The captain commanding a company is the only officer between whom and the soldier a personal relation exists in peace time. He knows every individual soldier in the most intimate manner,

and the soldier on his part is aware that his captain so knows him. It is upon this relation that the uncommon influence rests which he above all other officers has over the individual soldier, as well as over the whole company. The soldier sees his nearest home in his company, and he has under all circumstances a decided feeling for his captain, even though it be one of hatred. In most cases, however, it is a feeling of love, confidence and respect. The intimate and continual intercourse between them allows no room on either side for acting, each must appear as he really is, and thus, together with the bad qualities, the good ones also, which they both possess must come to light. They become accustomed to one another, have their fits of ill temper at times on both sides, but when at length the hour comes that they are finally to part, there is an earnest feeling of sorrow which cannot be suppressed. With regard to the higher grades of officers, such as officers commanding battalions or regiments, the soldier on the contrary has no personal relation with them, neither have these officers with him ; he has a respect for them according to regulation, otherwise he is, for the most part, indifferent. At the very most he knows whether his General keeps him long at drill and annoys him or not, and particularly whether he has any ridiculous habits. It requires very especial qualities in the higher ranks in order to make a real impression on the person of the soldier, and he who does not possess these

qualities can at most try by acting and coquetry, to make himself take with the men, but which in the long run generally tends to an opposite effect. However proud of his position a Colonel may be at the head of his regiment, the soldier looks on his Captain as by far the more important personage, and should the Colonel take to bullying the Captain on parade, to show the soldiers what a great man he is, the result usually is that the soldier respects his Captain the less, but certainly the Colonel not the more. The beautiful relation between the soldier and his Captain is a cornerstone of our army, and not one of the least firm ones. The highest reward which the soldier can obtain during his service springs from his Captain, viz. the confidence of his company leader, and he on his part will find in the attachment of his subordinate the most precious reward which will fall to him in his lifetime. Of all the annoyances with which the sorely-tried life of a company leader is so rich, the smallest part is caused by his subordinates.

This relation should guide us in our tactical formations.

The company fights independently, not because such a body is within compass of the human voice, but because the company is a magnet which attracts the scattered elements by means of the feeling of the soldier that it is his home, and through the person of his Captain, who, being familiar with all his men, can guide them with a word or even a look.

The influence and guidance of the superior officers in war should be analogous to those of peace time.

The officer commanding a regiment, who well conceives his position in peace time, will not be continually interfering in the education of the individual soldier, but will rather see the essential object of his place in the more ideal and important task of the formation of the corps of officers. If he should fulfil this in the right spirit, by instilling the spirit of chivalry, of attachment and delight in their profession, he certainly will be able to influence the common men far more by means of these intermediate instruments than if he were, with an utter disregard to his proper duty, to mix himself up with the details of the private soldier. In the field the superior officer should command, and come to an understanding with his officers in an analogous manner. It is only when his views are not deranged by petty matters that he will be enabled to keep his attention fixed on that which is great and important.

Following out these examples, the officer in command of a battalion should not take the direction of part of the companies on himself, but should rather lead all the four equally. It requires no small judgment of the nature of the ground and intuition of the whole "situation" in a commanding officer, to enable him to issue such short directions as are necessary to the company leaders. As for his commanding the

whole, and personally carrying out the details, the man was never born who is capable of the task.

CHAPTER VI.

On firing volleys and skirmishing fire.

Having come to the above conclusions, the question arises, in what form the company should fight, putting altogether aside its tactical relation to the other companies of the battalion.

If the forms in our regulations up to this time have been found not to answer to the purpose, we must always keep in view in the trial of new ones, that they should not be in direct violation of those in present use, but rather should offer themselves as the natural development of those which we have hitherto had.

Our present regulations do not so much require a complete change as a thorough rectification, a rejection of that which is pernicious, because it is superfluous, and a more precise determination of certain forms which up to this time have been merely sketched. The new regulation which has become a necessity for us has quite spontaneously grown out of the old, but the old integuments still remain, and for this reason the new forms cannot yet vigorously develop themselves. It is a sign of the healthiness of their course of development that the process has pro-

ceeded so gradually, and we require no sharp line to separate the obsolete from the new.

The adoption of new tactics is not necessarily bound up with the adoption of new regulations, or even with an alteration in our present ones.

Regulations should be permanent, and at the most should be improved periodically without fundamental change; tactics must always be different in every campaign. Tactics are nothing more than an application to a particular case of that which is determined by regulation:—a spiritual penetration of the exterior forms. Regulations, then, require a reform where this spirit has no longer any expression in them. It is possible completely to override the regulations, and also, while keeping strictly within the best of regulations, to bring to light nothing but imbecility.

We have previously laid down that our tactical forms must be based upon our *forte*, viz. fire, but in the first place we must examine closely the nature of this fire.

At present we have skirmishing fire, quick fire, and volley fire; and here, at the commencement, the maxim may be laid down, that in war, volley-firing is only possible in the rarest and most exceptional cases, and as a general rule there can be no such thing.

This certainly goes against all our previous conceptions, at least those according to regulation. In our exercises at present we have fallen into a complete volley mania; volley firing is held good in all cases, not for those alone in which

the leader says that a volley may possibly be effective, but in all. When a leader does not well know what to do, he immediately fires a volley. Whether the enemy who is thus volleyed is perhaps 800 paces distant, or whether he is out of sight of the greater number of the men, or whether he has advanced in a line of skirmishers or in column, it is all the same, he is at once volleyed. Cases have even been known in which leaders, who have been strictly admonished from high quarters not to be inactive, have fired volleys into the blue sky, which at least showed that they took an interest in the matter in hand. This may be called the fire of desperation. These volleys which pervade all our exercises, and which are in such high favour with many officers, owe their existence to the circumstance that they appear to the officers to give a warrant that the troops are at the moment in the hand of the leader. The well-delivered volley, with no after popping, is balsam to the heart of the martinet.

We allow ourselves to be seduced by the results of volley firing at musketry exercise; very mediocre as it sometimes is, we lay great stress upon the moral influence of a well-delivered volley, and we wish above all to preserve the "assembly," (*Appell*) in the troops, which appears particularly liable to be lost in a skirmishing fire. But only let a volley on the parade-ground, and in action, be compared. At the proof shooting inspections the company is restricted to sixty men. Twenty-

five of the worst and most careless soldiers are weeded out, and there then remains sixty men who have just successfully completed their musketry instruction. With these the whole thing is worked out. The men are drawn up carefully, the second shortest rank, against all regulation, in the front. At length the time arrives, a position is taken up at 400 paces parallel to the target, the dressing is then corrected in the most precise manner by the non-commissioned officer on the flank; the whole advance 300 paces, and are again dressed, so that the men may not crowd on each other; even the birds in the sky appear to be penetrated with the importance of the crisis, and somewhat restrain their twittering. Then comes the loud word of command—Fire. There is only one report, a weight falls from the captain's heart. The second volley passes off with a similarly happy result. Now comes the scoring—the company has got from 40 to 80 per cent. hits.

Now against this let us place the war picture.

The company is about 200 strong, and among these two-thirds have not had any practice for years—shoemakers and tailors, who have never gone through the second preliminary practice, and *ci-devant* orderly-room clerks. These persons soon adapt themselves to the accustomed discipline, but firing was never their *forte*. "The company will advance!" Forward! Right and left rattles the skirmishing fire. The bullets whistle, and men are seen to drop. Now a shell

hisses overhead, and causes an involuntary "ducking." The leader, well in the front, feels his breathing somewhat shorter, and his heart beats quicker; he sees, amid the smoke of the powder, a column. He cannot at the moment calculate its distance—he has but one idea—a volley. He orders a halt in order to load;* the column halts and makes ready; here the men are crowded, there in loose order: when opened out from their crowded state some do not see the enemy at all, others have not heard the word of command. In the moment in which the column halts, it becomes the most favourable object for the aim of the hostile skirmishers. The enemy's bullets come thick in among them, and before they can make ready, many fall wounded—Present!† The arms are severally pointed in all directions in the confusion and alarm; first a few, then more are fired; at last an independent file-firing develops itself under the most unfavourable circumstances.

A company standing under cover, which can advance with the greatest coolness to deliver a volley at the decisive moment before the fire is given, is generally an open mark for the enemy's fire, and this moment, as a rule, will be sufficient to render the whole volley nugatory.

But what tells especially against the volley is

* "*Zum Chargiren Halt!*" This is probably an error; for troops with breech-loaders would hardly halt to load. It perhaps means, "halt in order to fire."—Tr.

† "*Legt an!*"

that it requires from the leader more than he is able to fulfil. Should he truly estimate the point with the coolest and strictest attention, and judge the distance instinctively in a sufficiently approximate degree, he must then further turn the attention of his men (who, being drawn up under cover, cannot see the course of the battle) to the same point, which is a matter of great difficulty. All words of command must follow each other like lightning; each individual must calmly and collectedly aim at least in the direction of the object. If even one of these factors is wanting, the result will be equally null. In this everything is staked on one card; while in skirmishing or quick fire, an error of the leader can never be so destructive.

The advocates of volley firing may perhaps here remark that, above all, only cool and able leaders are fit for their position, and that with such only, the fire discipline which is requisite for this mode of firing can be maintained. But this ideal rule must be taken *cum grano salis* in real life. If requirements are made which cannot be fulfilled, discontent is the result, or despair; and the effort falls short of that which might in all cases be attained. No company ever consists of 200 cool and courageous heroes. In every company there are many elements which cannot be depended on; and if one captain could be found so cool as to answer all the conditions, as well as his men, this cannot furnish a rule for the 1,000 remaining ones.

A well-conducted quick, or skirmishing, fire is the best to guarantee great results with the least loss.

A volley is merely an exceptional incident. It is necessary and possible in action against cavalry. Horses are surprised and frightened back by means of it which easily become accustomed to the constant clatter of the skirmishers. Also, a volley may be allowable in surprises, when an intact body, which has hitherto been concealed, suddenly attacks in action by means of a volley. In this case, it can be deliberated on and prepared calmly beforehand.

In this point of view, we should not allow ourselves to be deceived by the battle stories of the war. There will often enough be tales concerning volleys which such and such a leader had turned to the greatest advantage; but these are only fine flowers of speech. Should a battalion on an advance halt without any word of command, and commence a hot independent file firing, which causes the opposing enemy to go to the right-about with great loss, the officer commanding, who is at first surprised and half beside himself, tells the story so often, that at length, in consequence of a self-delusion which is innate to human nature, he believes that he himself ordered them to halt and fire a volley, and that afterwards he directed the independent file firing. On the next day, in the very best faith, he writes this down in his account of the affair.

The second kind of fire, that is skirmishing fire, we have theoretically contemplated up to the present time as the introductory, preparatory, and checking fire. Supported by the experiences of the campaign in which skirmishing fire only was

used, we must pronounce that a skirmishing fire decided the battle. The further conclusion would then be that we should carry out the whole battle in a deployed order, the close order being merely for the march and preparatory formations. These views will be further explained hereafter; at present they are merely laid down as establishing the decisive importance of a skirmishing fire. A skirmishing fire, even in its former most restricted sense, has its opponents. There are Generals who lay down the principle, "as few skirmishers as possible;" and, in consequence, on the parade-ground brigades are to be seen in close column of battalions and in lines, drawn up both for attack and defence, without having a single skirmisher in the front. That such tactics are untenable is a point of view which pervades all that we have hitherto said. The whole contention concerning the battle formation of the present time may be approximately specified thus—What relation has a closed formation in battle to a deployed one?

The skirmishing is either the usual steadily delivered fire at greater distances than 200 paces, or the "quick fire," that is always taken up at 200 paces or less, on which, at decisive moments, success depends.

We hold that there is still a third kind of fire, which is in the same degree as important and necessary, and which at the same time requires a new formation for its base. This formation must take the place of the hitherto close forms, and its movements must be supported by fire.

CHAPTER VII.

Formations of the deployed line—On the double step—Modes of attack with a deployed line.

From our present closed formations, column and line, the column has been rejected, because it does not permit the full advantage of a musketry fire to be reaped, while it offers itself as a sure target to that of the enemy. The line formation is grounded on the principle of the volley, and with the rejection of that our present line formation must consequently be abolished. In all engagements of not too extensive a character, and in those on a field over which the view is impeded, the skirmisher swarm is the only battle formation which can be effective. This form should not be confounded with disorder because the rigid exterior has been departed from. The individually developed consciousness of the men, and of each officer, affords this formation a stronger cohesion than any exterior one could do, and it is in this manner alone that the weapon can be utilized and the operation of that of the enemy weakened, or that all the leaders can throw their whole moral weight into the scale of the battle.

In the pitched battles of more considerable masses, a formation will be required by which the troops can be kept more in the hands of the leader than is possible by means of the skirmishing swarm, and which would unite the two points,

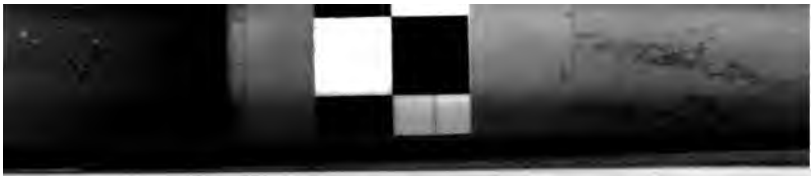
viz. greatest possible effect of musketry, and least possible loss from that of the enemy. The line, which alone means the full effect of a fire, has the disadvantage that its close touch prevents the men from using their weapon freely, or of taking a good aim, and at the same time offers to a hostile fire a compact wall of target, and also renders a rapid advance difficult.

All these disadvantages appear to vanish when the line is so formed that, instead of a close touch, an interval of two paces is left between each file. Such an opened-out line, as it may be called, allows every man the freest use of his weapon, as well as an unimpeded motion for advancing and retiring; it offers to the enemy, moreover, a target broken by gaps, while its extension is not so great as to take it completely out of the hands of its leader. A company of 200 men drawn up in such a line would take up a front of 200 paces. Its fire should be always quick fire, which is opened neither by word of command of a superior nor by signal, but rather at the order of a subdivisional officer. The non-commissioned officers (*unter-offiziere*) are posted in rear of their sections, and the officers in rear of their subdivisions, and thus the orders can be passed on in a loud tone of voice. As a quick fire can only be effective at point blank distance, that is at 200 paces, the soldier takes no particular aim; he presents in a horizontal direction, and pulls the trigger steadily. The number of shots which then strike at from 100 to 300 yards will be so considerable that the

purpose of the fire will be answered. An essentially easier task here falls to the lot of the leader than in volley firing. All he has to do, when the enemy appears to have arrived at about the proper distance, is to give the word "Quick fire," which he may then superintend till the order to cease firing is given, or till the whole hurries to a bayonet attack; but this last must never take place until the enemy has approached to within 50 paces.

The disadvantages under which these formations may appear to labour will be found to vanish when they have been well instilled by practice, and the highest requirements in musketry instruction should be always exacted, but within the bounds of that which is generally practicable. The opened-out line appears also not only to answer the purpose of defence, but it offers perhaps the only practical formation for an attack.

In order to attack a position defended by breech-loaders, two points must be taken into consideration,—first, how to pass over the distance of from 400 to 50 paces before the enemy without being annihilated; and secondly, how, under the circumstances, we may be enabled to have the troops well in hand in close order at the moment of the shock? The skirmishing-swarm attack, might perhaps answer for the first point of view, but decidedly not for the second. Judgment as to the nature of the ground, the able utilization of which might render the approach easy, would here seldom come into the question. We will hereafter touch on the point as to the

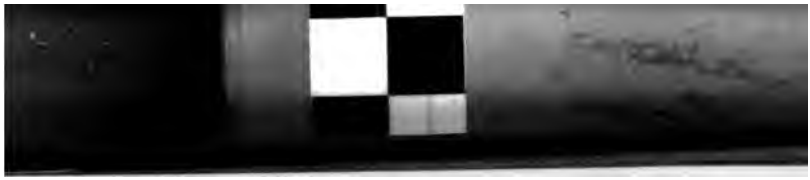


condition of the ground in relation to the breech-loader, but in the meantime we will here assume that the defending party, who have the choice of the field, will generally prefer a ground best suited for the employment of his arm, that is to say, plains of an undulating nature where there is little cover.

An employment also of our smallest and most handy column, the company column, has its very questionable side. Possibly, now and then an attack with this column, favoured by the nature of the ground, or other conditions, may succeed. As a rule, however, it may be laid down that under a breech-loader fire, and in open ground, such a column would be completely annihilated. Let us for a moment study the Austrian official account attentively and without prejudice. Let us not be puffed up, and trust to our rapidity of movement, after the Austrian fashion. If in the first fight only one-third of the attacking company column should be shot down, even though the other two-thirds might succeed, they would soon become cowed (*kopfsheu*), and not capable of being again brought to the front. Calm reflection is better than arrogant pertinacity and warmth, otherwise we may be taken in our own snare. We have tried the double time as a means of rendering nugatory the effects of a fire. The troops were ordered to make all movements at the double within a radius of 250 paces in rear of their own skirmishers, which would be at a distance of from 400 to 500 paces from the enemy. We then saw the companies jogging over the parade-ground in a

constant trot, even through the deepest sand. But we opine that little good will be obtained by this mode of proceeding. Infantry is not at the same time cavalry, even though in peace time the double step may afford a very pretty spectacle, and, from the continual bustle, give an appearance of the greatest activity. The great efforts of the men in keeping up this step may also afford the commanding officer some satisfaction in the thought that he has so full a power over his subordinates. But only let us reflect soberly for a moment on the shortness of this elegant step, which the interests of the dressing will require, and also that fatigue will soon assert its rights; then it will appear that the men would have gained as much ground, at least, if they had employed the usual quick step. The whole jogging movement which the men are required to make in the sweat of their brow,* appears to have no other purpose than to bring to their perception the idea of the double step. In the uneven ground of the battlefield, with tired soldiers laden with knapsacks, the double time would be impossible, and the men would simply decline to perform the service, however much we might fume and talk of an iron discipline which would compel them. In peace time it is very easy to exercise an iron discipline, as every sovereign whim even of an officer must be gratified, and the men well know that were they to refuse to perform the double they would be sent to

* *Im Schweisse ihres Angesichts.*



punishment drill, in order to be taught discipline by their severe taskmaster: all that would be required would be to give the order. But in war time such a discipline could only be maintained by an officer possessed of real military talent; and besides, many officers who are advocates of the double time in peace time would frequently in war be obliged to go into action dismounted; under which circumstances, were they to order the double, they would have to take it up themselves, and then their ideas as to the utility of the step would probably undergo a change.

The opened-out line also appears to be a formation answering to all the requirements of an attack. It would have to suffer the least possible loss, and be especially suited quickly to overcome impediments in the ground; a not unessential point, when we picture to ourselves how often a column advancing to an attack is brought to a momentary stand by an obstacle in the way, and in that moment draws upon itself the hottest fire of the enemy.

A rapid advance of this kind in good order certainly requires a most careful exercise. It should not be the run to the front of the skirmishers, but rather take the place of the advance of the line and column of the old regulations. The troops always work by word of command, and not, like skirmishers, according to instructions.

There are, however, two elements which would afford strength to these opened-out lines, and the first of these is fire. The lines, therefore, should advance continually firing.

Up to the present time we have always gone on the principle of as little firing as possible while on the move. This principle rested very justly on this, that the soldier should never fire until he had taken a steady aim, which it is very difficult to do while in motion. Great pains were taken to instil this bodily into the soldiers, solely with a view to prevent their firing away all their ammunition too quickly; for it was very properly argued, that if the men once got into a way of thinking that they could fire according to their own will, in their excitement they would blaze away their whole stock of cartridges without once seeing the enemy. We have, notwithstanding, been taught by the late campaign that it can very often serve the purpose to fire in the direction in which the enemy is known to be, even when the actual point of aim cannot plainly be seen. For the sake of example, we may suppose the bullets whizzing over a line of skirmishers who are well under cover, and between them and their support, which is similarly situated, then both officers and men will lose that undisturbed coolness which otherwise their position would have afforded them. The officer commanding would not be able to command and lead with presence of mind, and even the most intrepid leader would have to remain behind the rock when the bullets flew too thickly against it. We have fortunately now no longer the idea that an officer in the thickest rain of bullets behaves as if they were peas. Shots fired away as we have described may not have fulfilled their proper pur-

pose of placing men *hors de combat*, but they will have had nevertheless a most useful effect in crippling their moral activity. The judgment as to whether such a fire is necessary most certainly should never be left to the soldier, but should rest entirely with the officer in command, and should never take place except by word of command.

A line which advances, firing on the march, to the attack, gains advantages which should not be undervalued. In the first place, the material and moral operation of the mass of missiles discharged. The firing should be neither the irregular skirmishing popping, nor a steadily aimed fire. The company advances with sloped arms,* stepping out in as free a pace as possible. As soon as it has passed its own line of skirmishers the subdivisional officers give the word "Load"; upon which the subdivision halts for a moment, brings the firelock as quickly as possible to the present, fires, and proceeds in the same manner forward, loading on the move. As soon as they are again loaded they slope and wait till the caution is again given by the subdivisional officers. Thus the whole line advances firing till, at from 50 to 100 paces from the enemy, the ringing command, "Attack," is heard, when all rush forward with a loud hurrah. A retreat could be supported in the same manner by an analogous fire. In order that this fire should have a full effect, the soldier must be taught to bring his weapon to a perfectly horizontal present

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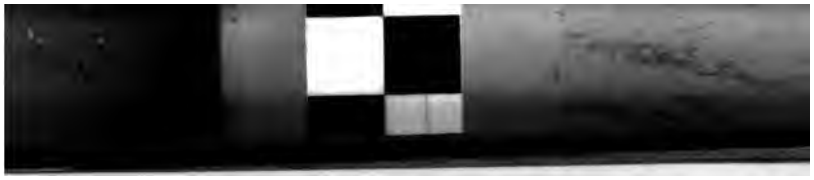
* *Mit Gewehr über.*

by a single movement, and then to pull the trigger without allowing the firelock to swerve. This method of firing, which may in another sense be called quick fire, should be so instilled into the soldier as to become a kind of second nature, and, as flat plains are not always at command, he should learn to accommodate his aim to an undulating ground. A different kind of practice without doubt will be required from that laid down in our musketry instructions up to the present time, at which the men should be continually exercised, and which must be understood in the light of a "conditional practice," the one or more conditions of which must be clearly pointed out. Such a fire, judiciously carried out, notwithstanding that no particular aim is taken by the soldier, will lead to results which should not be undervalued. A company of 200 men advancing 300 paces and firing as we have described, would discharge 2,000 missiles during its progress, which would spread over a space of from 100 paces before the enemy to 200 paces in his rear, and would under such circumstances render a steady deployment very difficult.

Among other advantages of this fire, a continual smoke would arise, which would have the effect of disturbing the aim and perception of the enemy, and at the same time would occupy the imagination of the advancing body, and their excitement, not to say fear, would be diverted. The advance should not be at all slower on account of the firing: the soldier should keep continually firing



and advancing into the smoke until he stands face to face with the enemy.

Besides the fire, there is another momentum which adds essential power to the opened-out line, and by which alone it can gain the proper shock power necessary for an actual contact with the enemy; for as it is always to be feared that a line in this loose formation would not be sufficiently compact to come to a shock with the enemy, and that the leader would not be able to co-operate, even by setting a personal example, and that consequently it would be liable to be broken by the vigorous assault of an opponent in close order; therefore, as soon as such a line has approached, continually firing, within 100 paces of the object of attack, it should close in while on the move at the double on the centre, or on any other designated point. Thus, at 100 paces from the enemy it would form a mass in the closest order.

In this movement there is nothing complicated; on the contrary, it is quite natural, and may be attempted by any company without previous instruction. We may cause an opened-out line or an ordinary skirmishing line to advance firing on a certain object of attack, upon arriving within 100 paces of which the signal may be given to close on the centre at the double and halt; the whole would then stand in close order. This sudden concentration at the moment in which the enemy is seen in close proximity is in accordance with an innate instinct of mankind.* The fire of

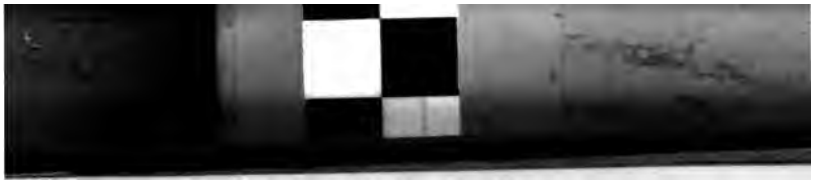
* And the lower animals also to a great extent. —Tr.

the enemy at this moment will have ceased; for no troops are so cool and collected as to be able to keep up a measured fire when their opponents are about to attack at the point of the bayonet. They would either go to the right-about, or advance and cross bayonets. It is very easy to say that we should train our men to keep on firing up to 10 paces when the contact is imminent. To do so would be to require that which is against nature. The hearts of the bravest among the defenders would be affected at such a moment, and natural instincts would prevail over reasoning powers. The signal for the final charge should be of a most ringing character, sufficient to penetrate the noise of the surrounding fire. By such a formation as we have pictured, all the benefit of the fire of an opened-out line is obtained; and at the same time it allows the troops to close up in time, and offer themselves as a closely-formed mass, capable of being well in the hand of their leader at the moment of the final shock.

CHAPTER VIII.

On supports of the deployed line—On deploying whole companies.

A COMPANY advancing to an attack in the manner we have just described should always be able to reckon on a twofold support; first, a support



which follows the attacking line, and which is ready to afford its aid should the shock in front be indecisive; secondly, another in rear of the first, to cover the retreat should the attack completely fail—a circumstance that may always happen. This last is the reserve. In all cases one, or, under some circumstances, two companies, should follow a line which advances to an attack, as immediate supports; while the company which has prepared the attack by means of its skirmishing fire, and supported it up to the last moment by a direct or flanking fire, remains in the position which it has taken up, and, in case of success, forms itself as a further support; or, should a failure be the result, allows the company which has been repulsed to pass through its intervals, and then again resumes its fire. A complete company should be employed to form the opened-out line, and another complete company to form a support in its rear; and under no circumstances should each company open out a subdivision to form the front line. This opened-out line can in no wise be confounded with a skirmishing line; and the rule that it should always be formed by a complete company is founded on the fact that the duties of the front line and its support are essentially different, and they each require the undivided attention of an independent and experienced leader. The command in the front line should be of the most perfectly single and united character; and this can never be the case if it be formed of two subdivisions belonging

to different companies. The attacking line gives the tone, according to which the support should direct itself; but this does not lay down the rule that it is to follow it through thick and thin, and allow itself to be mixed up with the attack in front under all circumstances, which would cause it to fall into disorder, but, on the contrary, it should be kept as long as possible out of all direct contact, in compact order. If the attack of the first line is successful without its aid, then there is only one portion of the troops affected by the disturbing power of the fight, which can follow up its advantage without paying attention to any particular forms, while the support remains effective in the hands of its leader. If, on the contrary, we split up two whole companies to take part in the fight in front, they would always be quite absorbed in the *mêlée*; for under these circumstances the intimate connection between the two lines would be too strong to permit of their being disposed of for different purposes. The company which we have described above as having prepared the attack by means of its skirmishing fire will form the *repli*, which will receive the companies who have gone to the front in case of failure. This appears to be advantageous from many points of view. In the first place, a support of this nature which would efficiently receive such a retreating body should act according to the whole situation of the moment in all its points, and this never could be possible in a detachment brought up from the rear. The company which is posted as skirmishers to prepare the

attack is in a position to form a correct judgment from the first of the whole state of affairs. During the rush to the front of the other companies it obtains a moment of repose, in which it can in a measure re-establish itself; and in this manner especially, the whole force of the companies will be equally brought to account.

The whole work of opening and carrying out the fight is thus not thrown on one pair of shoulders; another body stands inactive, in the rear, certainly, but still in such proximity as to suffer loss as well, so that it cannot be looked upon as intact. It stands to reason that a battalion which has to fight independently can never dispense with a completely intact reserve, to be ready to meet any unforeseen circumstances. Objections have been raised to the deployment of whole companies, inasmuch as it is urged that a company fighting in front must have another to support it, which would cause an intermixture of the two, which is not desirable; and that the formation of skirmishers and supports from the same company is preferable, on the ground that the connection would render the command an easy matter. But we think that these objections are based on what would be preferable under circumstances where operations on a more extensive scale are in question; and as the smaller ones are essentially different, the objection cannot be considered as valid. It appears to us that the throwing out complete companies as skirmishers, and keeping other complete companies as supports in close

order, is indispensably necessary. A company deployed as a skirmishing line will require a front of from 400 to 500 paces, and the first stipulation for such a line is an undivided command. On account of the small compass of our manœuvres, lines of skirmishers, such as will in future most frequently be required for action, are seldom practised, and thus, when at manœuvres on a larger scale such long lines become unavoidable, an incredible unreadiness is the result, both in moving and in command. Composed of subdivisions of from four to six different companies, each subdivision receives its own directions from the support in the rear, instead of the whole acting according to the state of affairs in their immediate front. Then it is seen that the possibility of commanding in war rests on principles which are totally opposed to those of peace time. In peace the connection between the skirmishing line and its supports is uninterrupted; the distances are reduced to a minimum, in order to make the leading easy. The officer in command remains mounted with the reserves, and freely superintends the whole situation; he gives or telegraphs his orders to the skirmishers, or gallops in among them, should he see occasion so to do. In action he will think twice about this (*lässt er das fein bleiben*). In this case, in most operations on a large scale, the distances are often materially interfered with by the whistling bullets. The situation or state of affairs before them can only be properly judged of by the skirmishers themselves.

All eyes are fastened upon the enemy, while at sham fights the mounted officer in the rear is the point which attracts most attention. Were the officer who commands to remain in front with the skirmishers in action, that would be the point of command, and then the support would sink into a mere automatic appendage to the skirmishers, whereas its conduct, as a most difficult and independent task, should be entrusted to an experienced and independent officer.

On the contrary, the command even of the most extended line of skirmishers in action appears comparatively easy. The "situation" in the front allows the whole body to work instinctively and equally. If one division advances, the other will quickly close up, unless it be restrained by special orders. In a connected line, orders can be passed on with the greatest facility; the kind of fire and the direction to be aimed at can be quickly imparted to the whole. A captain taking up his position in the centre of his deployed company, having his eye steadfastly fixed upon the enemy, and who quickly passes on his orders to the right and to the left, may be said to have his men truly in hand. That the working of the skirmishers and their supports are properly regulated, is the business of the officer commanding the battalion, whose command in action (one of the weak points in our former battle leading) will be effectually simplified by such an arrangement. Up to the present time, every captain with a small body of men shared directly in the fight. He allowed

himself to be guided by the enemy in front, and the commander of the battalion had no longer any power over the companies when once absorbed in the *mêlée;* they all fought eccentrically, separated one from the other. If he had one company deployed and three in close order he would know where his troops were. The accounts given of battles indeed give no true picture as to what really does occur. We see everything there related as if it had been done according to plan and command, when, in truth, the whole was the result of accident or some other cause. An officer commanding with his companies has gained an action, hurried along without any fixed purpose of his own by the flood of his men rushing to the charge. Suddenly, to his great surprise, he finds himself victorious! Would it not be requiring too much self-denial from such an officer to insist that he should write in his official report of the affair, I have gained a victory, but really I myself am perfectly innocent of having had anything to do with the whole matter!

Another very important point should not be lost sight of. As experience teaches us, a body of men once taking part in a fight soon becomes enveloped in the *mêlée*, and is then no longer in a position to be effectively under command. It should therefore be laid down as a principle, that when a body of troops are destined to act, it must be completely used up before another is pushed forward into action. Thus troops can always be kept in hand in close order, and by these means an influence over the battle may be preserved.

Certainly, under these circumstances, men of different companies will be intermixed; but this can be of no importance, as they all belong to one tactical unit, the battalion. They are not strangers to each other certainly, but still sufficiently so as to be able to find their own companies without trouble in the first pause of the fight. Such intermixture has nothing in common with the mingling of the men of different regiments.

The engagement of the battalion under the leading of its commander may be divided into these movements,—advance of a deployed company as a skirmishing line; introductory, preparatory, and masking fire of the same. Taking up a position (*einnisten*) at from 400 to 300 paces, 200 paces in the rear of this, that is at 600 paces, a company forms in an opened-out line, advances quickly up to and through the line of skirmishers, and as soon as it is clear of them it continues to advance, firing on the move. The skirmishers, who are lying down, support by a flanking fire as they find an opportunity. The other two companies follow those which have gone to the front as a support. The question now arises as to the formation and distances in which these supports should follow the opened-out line. Up to the present time 150 paces was the distance laid down for the support, which was based upon the range of the old smooth-bore arm. This was sufficient, taking into consideration the range, to render close columns, which are so sensible to fire, safe, and was at the same time sufficiently near

seeing the comparative slowness with which the movements were spun out, in order to await the proper moment for taking part in the action which was in progress in the front. With our present arm 100 paces further in the rear is of no consequence whatever. At 150 paces the support is no more out of reach of a hostile fire than at 50 paces, but as the fight is now decided much quicker, 150 paces is too far to enable a part to be taken at the right time in an action. A distance, therefore, of about 60 paces seems a more suitable position for a support; for it is near enough to take part in the action, and at a sufficient distance from the *mêlée* not to be affected in case of any accident in front; thus it remains always efficient and ready to be employed.

This support must be in column. In the first place it is no battle formation, but a preparatory one, which enables it to be employed in any direction. Our company column will be generally good for this purpose. As to whether it should be formed into three or four subdivisions—whether the subdivisions should be formed one in rear of the other, or in sections on the centre—is of no importance. On the other hand, other modifications appear essential. We advance with the second rank always closely locked up with the first, and at the last advance to an attack we make the whole of the subdivisions lock up closely. This may have answered the purpose when such tactics first came into vogue. The element, which on account of its deficient military education was

not to be depended on at the decisive moment, could not be too closely packed together. The purpose was less that of obtaining a greater shock power, than through the close locking-up of the rear subdivisions—who from their position were less in danger—to drive forward the men in front. At present our tactics are not founded on such elements. Without falling into too ideal a view of the individual soldier, we may assume that discipline and education would make such purely mechanical aids superfluous. At present this close locking-up of ranks appears to have the result of rendering a forward movement extremely difficult; the men stumble over the ground and their own feet; men falling down bring the whole column to a sudden halt, and a well-aimed grape-shot causes them all to scatter. It appears judicious to allow a distance of four paces between the two ranks. The first rank can then march freely, and the rest follow in the same manner. An interval also of one pace between each of the files facilitates most essentially a free advance. Let such an advance only be practised on rough ground, and the advantage will soon appear. Should a closer formation appear necessary, the simple command, "Close up," would effect the purpose in the shortest time.

CHAPTER IX.

Results from the preceding.

If we make a cursory examination of the elements of the battles of the present day, in order to come to some conclusion as to the direction which must in future be taken for the forming and education of the army, so that it may respond to the requirements of modern fighting, one chief point shows itself most clearly, and that is the value and self-reliance of thoroughly educated soldiers, as well as of every individual leader. Soldiers suddenly raised and quickly made, even with the best spirit, only allow of such tactics as would neither reap the whole advantage of their own power, nor permit them to withstand that of the enemy. The leading can no longer be understood as that which can be clearly and expressly laid down by rule; general directions only can be given; the "how," and in many cases also the "what," must be left to the subordinate officers, and perhaps also to the soldiers themselves. A prompt action, in accordance with the whole "situation" as it offers itself to those fighting in front, and a perception of the advantages or disadvantages gained, by the commander who superintends in the rear, may characterise our present mode of fighting.

But, precisely on account of this object, the whole system will find many adversaries who

might have approved of its several rules. Without reflecting that such an elevated independence of the individual soldier is only possible on the principle of an advanced education, many see with alarm only irregularity in the freer and more untrammelled forms; zeal and enmity, wounded vanity and idle derision fight equally against them.

It is said, derisively, that it is a going back to the original condition of mankind, and the battles of savages. This shows a complete misapprehension of the meaning, as well as of the essence of modern warfare. The battles of savages show the ideal notion of a fight in the most perfect manner. Every individual warrior is filled with the idea of the battle; hate, passion, desire for plunder, set all his mental and bodily powers on the highest stretch. A similarly full-perception of the object of the fight on the part of every individual warrior is seldom seen in our modern wars. Only the most ideal fight, such as wars for freedom, sometimes exalts the individual warrior in a similarly high degree. In by far the most battles we are not so fortunate as the savages. Large numbers go to battle not filled with the idea of the war, but because they are obliged to go. Trouble has been taken to instil a warlike spirit into them; but, notwithstanding this, the external rigid form of discipline must do its best, in order to restrain the opposing elements. It would be a most lamentable fact, proving the deepest degradation of mankind, an endless retrogression towards

the battles of savages, if a consoling thought did not float over the whole, that these modern wars are not waged on account of sensual passions or material rapacity; but on the contrary, in virtue of a great idea, that each war and each shedding of blood is a step in the path of human development and freedom. Thus we see in the wars of savages that each individual warrior is filled with an idea, but a low, half animal one; while with us it is an ideal principle floating over the whole, and only deeply seated in the hearts of the best of the people, while the mass unknowingly and often unwillingly follow the pressure. If we could once make such an essential progress that even the meanest soldier would be filled in a like measure with such ideal thoughts of war, then we could give up rigid forms altogether. We should then be able to fight like the savages, the whole mass would be borne on and kept in order by the indwelling spirit. Towards this aim we must strive, when at the same time we must allow we shall scarcely ever be able to reach it.

The want of an individualisation of the fight is not a consequence of the breech-loader, but the breech-loader rather is a consequence of the qualities of the army, which has arrived at the degree when the arm became necessary. Breech-loaders have been known for centuries, and if they have now been found practical, the reason is to be looked for in the fact that the army has now for the first time shown itself ripe to appreciate their merits. The chain which connects those who appear to be

fighting in an irregular manner is not loosened, although to the natural eye it is not so easily to be discerned. In the movements of the skirmishers of a battalion according to regulation, those persons also who had been accustomed to former columns, the men of which only put their legs forward, or presented arms at the word of command, would be able to see nothing but irregularity and indiscipline. The experienced eye sees the spiritual connection. In the strife of the individual armies of Europe for the leading place, those powers will not gain the day whose arm can be discharged ten or twenty times a minute, but rather those who demonstrate in the most substantial manner the enlightened views of the present time. Our age strives after the spiritual emancipation of the individual, and the national moulding of States. Those armies will gain the palm, in which every single member is filled with individual self-consciousness and national pride.

CHAPTER X.

On conducting a battle.

The solution of the important question as to the means that it is necessary to adopt in order that the troops may remain in the hand of their leader, while justice is at the same time done to the requirements of the new weapon, depends upon

the fundamental view we take concerning the individual worth of the officer and soldier. If opinions should differ concerning this basis, all disputes about half measures are useless. Both points appear to stand in a certain opposition to each other, hence the difficulty of the solution. In the Campaign of 1866 we saw the troops, that is to say the companies, very nearly out of hand, because they found that they could use the breech-loader with greater effect independently. When we say out of hand, we mean of the commanders of regiments and battalions. These phenomena cannot rest on personal relations, inasmuch as they showed themselves in the same way everywhere. Some cast the reproach on the troops, and more particularly on the captains, that they, thinking more of their personal renown than the good of the service, allowed themselves to fall into eccentric operation. The remedy for this is frequently sought in purely external relations. It is said that the companies should not be withdrawn from the direct command of the battalion leader; but instead of the troops accommodating themselves to their leader, should not we rather require that he should accommodate himself to the peculiarities of the new tactics, and endeavour to obtain some other influence over the troops than that of a direct command? Did not the faults of 1866 lie rather in the leader, who in the presence of the new and surprising tactical phenomena did not understand how to improvise immediately a new means of commanding, but who, on the contrary, clung only to the old obso-

lete fashion of an earlier period, and seeing that this would not work, let matters go, and allowed himself to be carried along by the stream?

The expression, "to leave the troops in the hand of the leader," however, requires a clearer explanation, in order that demands may not be made on leaders and troops which it is impossible to fulfil.

A body of men is engaged in action in a musketry fire at a distance of 200 paces from the enemy, or it is advancing on a hostile position. Such troops are no more at the free disposition of their leader. The kindled fight appears like the war of the elements, against which individual man stands powerless. Such a body may be pushed to the front, and it can be beaten back, but with these two simple possibilities all means are exhausted. They can neither be called back out of the fire nor relieved, neither can any other object of attack be assigned to them. They remain incapable of all leading till the end of the whole affair, which possibly may endure for hours.

This important truth is very generally ignored, and from such false views arise all the impossible requirements which are very often made on the leader. When a superior officer by faulty arrangements has allowed all the troops to get out of hand, he afterwards requires from the inferior leaders that they shall exercise a command over the troops which is opposed to all the laws of a fight. It is laid down in the regulations, that to draw off troops out of the *mêlée* of a fight, and to take up an orderly retreat, is to be considered as

a matter of course, and examples are cited from the history of war in support of this view. But these very examples—always favoured by fortunate circumstances, in which the extraordinary valour and activity of the troops are held up as a pattern for having achieved the difficult task—just prove our position, inasmuch as they are merely the exceptions to the rule. But silence is kept of the countless examples in which failure was the result, because such a task never can be carried out except when favoured by special circumstances. Theory, indeed, speaks of a discipline which never allows the command over the troops to cease for a moment under fire, but the relaxation of discipline caused by a musketry fight is a war experience which does not admit of considerations founded on theory.

If we proceed from this basis, it appears that in the same battle, or at least in the same encounter, we can only make our dispositions over a body of troops once. We can indicate to them the point of attack, and say "Forward," but what occurs further, and especially their return, will depend upon the enemy. When the decisive "Forward" is uttered, from that moment all free disposition over the troops ceases. It is inherent, and one of the elementary laws of a musketry fight, that even as we cannot command the tempest-stricken vessel, and bid it cease its battling with the waves and recall it to the haven, even so little can we recall troops at our pleasure, when once they have been committed to the storm of

the battle. If there exists an immediate connection between the body of troops who are engaged in the front and those stationed in the rear prepared to support them, the former would by degrees draw the others into the fight. The supports would come up before they were wanted, and thus the troops would be unnecessarily submitted to the destroying element.

It appears as an urgent requirement of a modern engagement, to take all out of the troops, even to the last drop, when once engaged, before another body is brought into use. It is scarcely necessary to say, that we do not mean it to be understood that we must first allow the troops to be defeated; but a body of men, that knows it must still hold its ground without being supported does that which is uncommon, as was shown at Nachod. The want and the wish for supports, indeed, always shows itself very early. There was scarcely ever an officer detached for a special purpose who did not almost immediately send back word to the rear that he was too weak, and required considerable supports. It is even by the supply to answer such demands that gradually the troops are lost out of hand.

The principle of not allowing the troops gradually to get out of hand by supplying supports before the proper time, but rather of permitting the first portion which has been sent into the fight to be fully used up (*zu Schlacke ausbrennen zu lassen*) before they are supported, leads to the following conclusions: when troops are sent to

the front, different bodies of troops should not be broken up by driblets, for in that case the homogeneity* would have too powerful an influence. First one body of troops should be completely used up before breaking into another. Thus, we should first break up a second company when the first is wholly absorbed, a second battalion only when the first is quite used up; then we shall always know what we still have at our disposition. In larger bodies of troops this principle is different. If a brigade were first to use up one regiment and then the other, the two different regiments would become intermixed. A simultaneous engaging of battalions from both regiments avoids this, while battalions placed in the rear as independent tactical units have no such homogeneity with the body fighting in front as would lead us to fear their unauthorised rushing into the fight.

From this we may conclude that the fighting of brigades in lines, employed up to the present time, and the passing of one line through another, rests on principles which have long become obsolete; and further, from this we may obtain the important lesson in what the command in a battle properly consists; — for example, the brigadier can only once say to each of his six battalions in battle the decisive word "Forward" — with this the whole of his command ceases. The great

* This means that the companionship of the men would be so strong, that when one portion of a body of troops was fighting, the other could not be held back, but would rush into the *mêlée*. —Tr.

difficulty of this command lies in fixing on the right moment and the right place to send these battalions to the front. This is the decisive point, for which there is no other rule than the inbred military talent for command. With the moment in which the brigadier has sent his last battalion to the front his power ceases. Should the time chosen, or his view of the battle be false, no bravery on the part of the troops can avert its loss. Here a correct conception of the situation requires military genius. To rush into the *mêlée* afterwards in order to make good the error in judgment by giving commands to particular companies, or by personal bravery, cannot be called commanding a brigade.

All leaders have command over a battle which is raging only in so far as they have intact reserves posted out of its influence at their personal disposition. Without these the greatest General is a mere powerless creature. What good can it do him even if he finds out with a sure glance during the course of the fight the decisively weak point in the enemy? Before he can make the manifestly vain attempt to withdraw troops that are already engaged from the battle, the whole state of affairs would be completely changed.

A reserve which a General keeps in hand is certainly not such as under no circumstances should be thrown into the fight. It would be difficult to believe that such a senseless interpretation by a literal acceptation of the words can be understood. It is rather such a reserve as shall be brought

to bear whole and intact at the last decisive moment. If the General gives it out of his hand, that is to say, if he judges falsely at this decisive moment, he is surely lost; but if he has perceived the moment correctly, by his playing this card he gains the command over the situation and the whole battle.

We believe that in the proper perception of these principles lies the essence of command in action.

CHAPTER XI.

Manœuvre tactics—Battle tactics.

The manner in which the task of keeping the troops in the hand of the leader during manœuvres is carried out, is certainly no rule for the veritable leading in battle. Although manœuvres should give as true a picture as possible of war, still the difference between these in the means at disposal, as well as in their object, is so great, that it is necessary from the commencement to accept certain anomalies which are incidental to manœuvres in spite of their undeniable advantage. But if we take into account these necessary differences in judging of manœuvre tactics, we can easily draw certain conclusions from them as to how we should think concerning the command in the field.

A few words on the character of the differences between manœuvres and the real fighting will be

here necessary. In the first place, the principal object of the manœuvre is to exercise in the most manifold way both men and officers; of actual war to attain a precise military end.

At manœuvres the troops must be placed in as many different battle situations as possible. To fight or not to fight cannot here be at the pleasure of the leader, while in war, fighting only takes place when the object cannot be gained without.

As in peace time many considerations will weigh in the employment of the ground, therefore there is very little choice in this respect. Thus, from the commencement, the leading measures must be so taken that the action shall take place on such grounds as appear most instructive. The whole course of the sham fight also cannot be made, as is often proposed, dependent on the ability of the individual leader; for the relations of maintenance and quartering must be made beforehand, and these operate so as to fix the course of events. To bring matters in this direction into as near a resemblance to war as possible would lead to the most strange collisions. Add to this the leader cannot here develop the particular qualities on which in war the victory rests. In the first place, therefore, the essence of a strategic plan is wanting,—freedom of operation in the leader based on uncertainty with regard to the enemy.

Thus the action will develop itself to a fixed point, with regard to which merely unimportant differences can arise. In these sham fights the relations as to time must be very much changed.

In war the bloody struggle to gain possession of a wood lasts half a day, the battle changing from one place to another, and personal bravery and material loss are the sustaining and finally the decisive principles; but both these factors are wanting in sham fights. It would be folly without these elements to chase one another about a wood for half a day. All movements also follow much quicker. Here time plays no *rôle*, but simply by having regard to the distance passed over, time plays the same *rôle* as in war, and thus a contradiction arises which gives occasion to the greatest anomalies. Fighting on a retreat in a sham fight is therefore one of the most thankless operations, because the time taken up by the retreating side for the simple rearward march is the same as it would be in war, while the attacks which are made to delay the pursuing enemy do not take up one-tenth of the time that they would do in actual war. Instead of a rearguard affair arresting the pursuit of the enemy for from three to four hours, the whole is over in half an hour. Let the retreating party manage its retreat however it may, the pursuer always must be again at its heels. The laurels which a General can gather in a sham fight against a retreating corps under these circumstances are very cheaply gained.

In connection with this there is another and most glaring anomaly. When after a bloody struggle, lasting for hours, the defensive position is carried in actual war, the attacking party is both physically and morally exhausted; its troops are weakened by material loss, and its tactical

order has long been broken up in the *mêlée*. They are no longer capable of being employed. The assailant sees the object of the attack gained, he re-forms, his troops take up a position and halt on the spot. In a sham fight, on the contrary, the carrying of a position in a few minutes causes neither a physical nor a moral exhaustion. The victor follows up his advantage with a redoubled zeal. In truth, indeed, it would be against common sense, and the object of the manœuvre, which is intended for the instruction of the troops, if they were kept halted for the rest of the day, because under such circumstances in actual warfare they would have been decimated. Thus troops make perhaps ten different battle movements in one day during sham fights, while a single one would be a good day's work for them in war.

These points, which are unavoidable in manœuvres, give rise to a number of false ideas concerning the employment of the troops in action. The officer who commands at a sham fight, and practises his troops in ten different manœuvres, withdraws them all in good order, often very little thinking that in war they could only once be led into action, when his power over them would be totally paralyzed. If the anomalies we have mentioned be unavoidably inherent to the manœuvre itself, other contradictions also will arise from circumstances dependent on other considerations.

Instead of forming the troops as they would be formed in action, at sham fights no consideration is given to the fact, that they are not exposed to

fire, and one principle seems only to rule, viz. not to let the men get out of hand, that is, to keep them under the eye of the leader. The judgment it is true is not clouded at a sham fight, as it would be in war, by the constant personal danger, but there is another consideration which tends to a like effect—that is, fear of the judgment of the officer who acts as umpire. Thus an officer frequently does not act according to his own military views, but according to the principles which he knows are held by the superior officer with whom the final decision lies. Thus he acts in contradiction to himself. We may say without exaggeration that many absurdities in manœuvres would never take place in war, as there are a sufficient number of officers who are much more cool in presence of a hostile fire than before the incisive criticism of the superior officer who lays down the law. Then manœuvre tactics have seldom any enduring influence upon the minds of officers who are independent thinkers. They would act very differently in actual war. Indeed there is something characteristic in the fact, that foreign officers study our army and its manner of manœuvring, and then give their opinions on Prussian tactics. These officers may be very well assured that all which they have seen at such manœuvres will never be practised in war. There lies a certain subtlety (*raffinement*) in our manœuvre tactics; they scarcely however remain without results.* The anomalies perpetrated sink deep into the minds of

* "Bad results" is meant.—Tr.

the troops, and poison the judgment of the officer who is not intellectually self-dependent. The same holds good with regard to formations of the troops.

It is now an indispensable requirement to have the troops well in hand; this the leader can very easily do at manœuvring. He knows the place where the officer who has to decide will be, and there all the force must be on the spot. For this reason he conducts all his troops, battalions, batteries, and squadrons, on one single narrow road, in a kind of goose march, all thickly packed up together. In this manner none of his force can possibly go astray, especially if, fortunately, there are fields which cannot be encroached upon on both sides of the road. That the troops on a war footing would take up a distance of more than three times the length, that on long war marches to thus crowd the troops together would not be practicable, that the deployment for the battle would take up at least a twofold length of time—is never taken into consideration. The opponent has concentrated his troops in the same manner on the same manœuvre ground, and both masses are brought into contact. The troops of the attacking side draw up, perhaps covered by a hollow ground, which is sufficient to contain them all thickly massed together. That such a crowding together of heavy masses would not be practicable under an artillery fire—that the troops on a war footing would be too numerous to be contained in so small a space—does not strike those in command. Then follows the attack, the characteristic feelings of which are that neither distances nor

the operation of a hostile fire is ever taken into consideration. The troops in thick columns, which are most suitable to avoid getting out of order, are all massed together, and thus, with drums beating, they rush to the attack. At 80 paces, perhaps, a withering skirmishing and volley fire is kept up, in which both sides would mutually annihilate each other, like the two famous lions which we have heard of,* and then the one which is on the defensive draws off and retires. Then comes the criticism: "The troops were very well in the hands of their leaders, but fault is found that the distances were not properly kept." But it is quite forgotten that the whole of these tactics would be knocked on the head by due keeping of such intervals and distances. It may appear very remarkable that if these defects really are so very apparent, that officers who command in these manœuvres, and who are tried men, have not endeavoured to make a reform. But the points which affect the whole mental activity of the commanding and the leading officers are too many: in the first place, their fixed attention is not directed on what officers are doing, but how they do it. The numberless considerations in peace appear not to allow of a true picture of a battle being represented; it is thought sufficient to feel very certain that in war time things will be done in a very different manner, thereby wholly losing sight

* Or the two Kilkenny cats, who fought in a tan-pit until nothing was left of them but two tails and a piece of "flue." The history of the two lions is to be found in the well-known memoirs of the Baron Münchausen.—Tr.

of the fact that the views of the greater number become accustomed equally to these false pictures, as also that by degrees self-criticism slumbers, and the individual imagination ceases to be independent and acts according to that which is customary. During the review both time and inclination for critical contemplation is wanting, and when we have returned home for repose, inclination and time is also deficient. Thus, from custom, the old faults are persisted in, even as he who would learn a foreign language without the control of a teacher becomes accustomed to the grossest errors, while, confident in his own diligence and delighted with his apparent progress, he does not remark that he is ever wandering further from his subject.

CHAPTER XII.

Significance of local fights in the tactics of the future—Forms of battle for infantry against cavalry.

In contemplating the forms and character of the present mode of fighting, we must not overlook the very important point of the relation of these to the nature of the ground on which the action takes place. But before we go further it is first necessary to examine the question as to whether in future it will ever be possible to deliver pitched battles on a field anywise approaching to a plain. Will not the insuperable element of the fire rather necessitate the adoption of individualized local fights, and the choice of a more trenched and

broken ground for the scene of action? In other words, will local actions play a prominent *rôle* or not?

Guerilla warfare is the proper nursery for local fights. Soldiers without military discipline or education, but endowed with patriotism, independence, and personal bravery, and acquainted with every locality, are apt to see in the temporizing and harassing local fight the only feasible means of bringing their *forte* to account against a regularly schooled army. They thus prescribe the law to their opponents, who then fight with their weak point against the strong one of the guerilla; and this already indicates that a local action may be sought, in order to compensate for the want of a regular military force. In the Seven Years War there were no local fights; the rigid discipline, the essential *forte* of the armies of the period, caused them to see only an element of confusion in such a mode of fighting, as their education, based on the idea of open warfare and the fire of large masses, would have lost its advantages in a localized fight. The natural disposition of the North Germans was more inclined to rigid forms than to untrammelled fighting, did not favour local fights, and it was North Germany which prescribed the tactics.

In the French and Napoleonic wars, on the contrary, local fights came into the highest estimation. The pervading want of military education, and especially the inferior nature of the firearms, gave the defender small chances in an open field. It

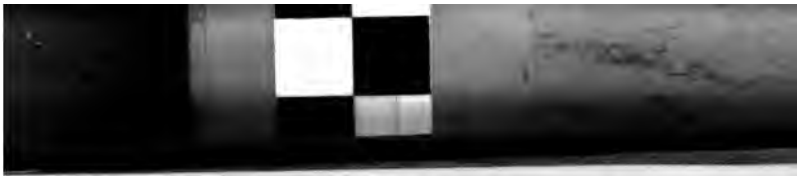
was not necessary to fear the relaxation of discipline caused by a local fight; for a national feeling, personal bravery and ambition, and not rigid discipline, was the cement of the army. The local fight supported the weak points, and allowed the strong ones to be fully brought into effect. Frequently a battle has been decided or essentially aided by an obstinate struggle for a particular spot.

The Campaign of 1866 showed an exactly opposite state of affairs. True, the armament of the two hosts was not equal, but the stronger arm prescribed the law. The local fight, in its proper sense and on a large scale, was not known during the campaign. And this difference was shown in the most striking manner in the struggle for the wood of Maslowed, or rather *in* the wood of Maslowed. The principal idea of a local fight is that the defender considers the locality as the essential object of his defence, and the assailant, by his carrying it, seeks to make a breach in the enemy's line. By the struggle to gain this point, strength is wasted, and on its final turn depends the victory. It does not lie perhaps at the pleasure of the defender to give up the point and post himself in open ground somewhat more in the rear.

At the affair of the wood of Maslowed the Prussians both strategically and tactically were the assailants; the Austrians were on the defence. The holding of the wood was neither in the Austrian plan of the defence, nor could it be so.

Thus, without any essential battle, the wood fell into the hands of the Prussians. Now the whole conditions suddenly changed. The Austrians began the battle for the wood with considerable and decisive force. Their attack plainly could not have been for the purpose of gaining possession of the wood; this would have been of no use to them, for as soon as they had taken it they would in their own interest have been obliged to give it up. The effort of the Austrians therefore was nothing more than one of their attacks—the result of their pervading principle of taking the offensive. In this struggle at the wood, he who exhausted the greatest part of his force would be the one defeated, either whether he remained in possession of the locality or not. That the Austrians, forced by exterior relations, at last evacuated the wood, was only decisive, for the reason that the two corps which should have formed the right wing were now no longer in a condition to fight. Had these forces stood intact at Maslowed, the possession of the wood would not in the least have decided the affair.

The fight at the wood of Sadowa showed analogous conditions. The localities, without any serious fight, fell into the hands of the Prussians. The decisive point was to debouch from the wood out on to the plain. The preparatory operation of the Prussian artillery could not accomplish this, neither were there any tactical forms which would have rendered possible the advance of the infantry. The battle on the left Austrian wing also showed



no local fight. The Austrians exhausted themselves in fruitless attacks to the front, and the previously prepared fortified position was evacuated as soon as it was submitted to the test of fire.

Finally, with regard to the so-called key to the whole Austrian position—the strongly-fortified Chlum—it was neither attacked nor defended. The Prussian Guards pressed on the unfortified and unobserved side towards the south, and this decided the affair; not, perhaps, because the locality had any particular importance, but because it proved that the right Austrian wing was annihilated, and the strong central position was taken in the rear. In the most open plain the conditions would have remained the same.

Other actions, such as Nachod and Skalitz, show the same results. A local fight was nowhere decisive—the practical issue was to be found in the fact that one side, through an open fight in the field, suffered a loss so considerable as to decide the battle. The action to win Skalitz was merely an episode of an affair on the retreat. The grave point lay in the attack to the front of the brigade Fragnern before Skalitz. Only let these conditions be compared with former local actions, and the difference pervading the one and the other is very apparent.

Fights in a certain sense local, will no doubt always occur, for it is impossible to change the nature of the field, and it is upon this that these fights depend.

Troops also who are obliged to avoid open

ground on account of their small number, or their moral weakness, will always seek a refuge in local fights. The question is essentially this,—Will local fights be sought in the interest of the new armament, and if so, will they have a decided importance? These questions must be answered in the negative.

If the party on the defensive has at his disposition well-trained and disciplined troops, armed with breech-loaders, he can venture to take up a position on an open plain in order to repulse the assailant by the weight of the fire of the masses, which can be alone developed under such circumstances. Firing, and a united command over the battle, obtain equal advantages over a field of this nature. The immense scattering of troops would be prevented, and the assailant would find no protection in the locality were he to break in upon the position, but would be exposed to the full shock of the reserves of the defence. The assailant is obliged to act according to the law laid down for him by the defence. Should a village be not at all, or very slightly, occupied, and the main body drawn up in the open ground behind it, the possession of such a village would afford the assailant no advantage, for he would have to attack the defending party behind it afterwards.

At the base of these conditions lies the cavalry, whose importance is not diminished by the improvement in firearms. So long as the decision of the battle by means of local fights is carried on on ground which is not practicable for cavalry, of

course the importance of that arm remains in the background. Now the infantry chooses the same ground that is suitable for cavalry, and it should not be rejected, for this reason, which is merely one of a secondary nature. In this light the question of infantry attack against cavalry acquires an enhanced importance. Theory, indeed, has made the solution very simple; it says the cavalry cannot approach under a modern fire. Square formation, or even closing up, is superfluous; the simple skirmishing fire will suffice to drive back the cavalry. This view gains an ascendancy because for a long time there has been no veritable cavalry to fear—that is, such a cavalry as has had a cavaleristic spirit inspired into it by a born cavalry leader. Well-set-up men, seated on well-dressed horses, cannot be called cavalry, neither can a tailor with a lance in his hand, stuck upon a horse for three years, ever make an Ulan; he will always remain nothing more than a tailor with a lance.

It does not require a great deal of cleverness to deduce from this that a deployed company, perfectly self-possessed, and well in hand, requires no square formation, but that its volley can repel any attack. Cavalry, however, has never been dangerous to well-posted infantry in good order; their harvest lies where the order of the infantry is broken, and where they are both physically and mentally exhausted, and no longer an obedient instrument in the hands of their leader, more especially when their moral element is

broken on a retreat. If infantry is hurled out of a position and rushes to the rear in disorder, which is often repeated, even in the most victorious battles; or if, after a lost battle, the whole body retreats, then the theory certainly cannot hold good that infantry should always stand to receive the attack of the cavalry. All is here in motion, in confusion, the leaders are dead, ammunition fails, arms miss fire, legs run back, and the head is confused and exhausted, like the burnt-out slag of a furnace.

The cavalry does not approach from the front or flank of the retreating party; covered by an undulating ground, it bursts upon the scene. Then, no appeal to the presence of mind of the infantry has any effect, neither has steady volley fire. These must be done now as formerly; the infantry gathers itself together into a dense mass, and at 50 paces, under command of the senior officer, gives a volley into the cavalry, the value of which is in the noise, the flash, and the hissing bullets, even if half of them fly harmless into the air. Our square formation is certainly an old, obsolete affair. If there is time, and the men are in order, cavalry may also be received in line. But knots of any size, of any composition, with any direction of front, are a most important requirement. They must ball up quickly together in a moment, no matter to what the men belong; they must give a most undivided attention to the leader, and, after the attack has been repulsed, must again take up their retreat, formed as best they can.

CHAPTER XIII.

Forms for a battalion in a pitched battle.

We have pointed out, on more occasions than one in the course of these remarks, that the skirmishing fight, or rather fighting in loose order, will be the ruling form, and sometimes the absolute rule. We have also shown that preference will be given in the choice of a battlefield to a ground which approaches to a plain, and on which there is nothing to break the view. Consequently a pitched battle will be the requirement for the large concentrated masses on such a field. By a pitched battle we mean one in which a strict connection is kept between the several tactical component parts of an army. However much this form will differ from the former analogous ones, and however much we may consider that every form will be broken up by the immediate contact in action, still such masses must always be ranged in good order before, and up to, the point of attack; and after that has taken place, the same order must be again established as quickly as possible.

For this reason, forms must be laid down for the higher units which are composed of battalions. The next higher unit to the battalion is the regiment; the infinite homogeneity of which, founded on its whole internal organisation, makes it appear fitted for a united tactical employment. For the greater conditions of an army, a still greater unit

is required—the brigade; and this is the largest body for which it is necessary to have any fixed forms. The principle of the employment of battalions is the same in both of them.

We here give the forms for the engagement of a brigade, which, as a part of a larger battle line, is connected with the same for the purpose of carrying out a particular movement.

First is the *rendezvous* station. The two regiments stand—as we already have it in our regulations—side by side; the three battalions of each regiment one in rear of the other. This placing of the regiments one beside the other favours the principle that it is necessary, in the unavoidable confusion of all fights, to endeavour to throw out only portions of the same body of troops in one direction, in order to maintain a united command, and the restoration, as soon as possible after the fight, of the tactical order. The battalions, however, should be placed one in rear of the other, because it appears expedient to use up first one tactical unit before we subject the second to the dissolving element of the fight.

The four companies of a battalion should never be arbitrarily broken up, as in this case the strongest cohesion of the troops, which has become a second nature by means of their education, would be destroyed. The Brigadier especially should not make chess combinations with his twenty-four companies. He has six units by which he reckons, and which he combines with regard to the principles of the fight. Each of his officers command-

ing regiments has a fixed task—the command of a wing. The Brigadier preserves his command over his two subordinates in command of wings, by clearly pointing out to each what he has to do, as by these means the moral condition and therewith the actual co-operation of both is secured, and also by means of the reserves under his command, which are posted in the rear; but not by Adjutants tearing about in all directions, who, by continual orders, often contradictory and not in accordance with the situation, undermine all independence in the officers commanding, who are thus kept in leading-strings.

It appears more advantageous to form the battalion in four company columns, drawn up one in rear of the other, instead of a column on the centre. Our columns of attack rest on an obsolete principle, that attention must be paid to avoid inversion. The column we now have appears a helpless mass, a kind of box, of from 60 to 70 paces broad, 35 paces deep, harassing to the men, and unhandy for the officer. But if the companies are drawn up one in rear of the other, the front is about 32 paces by 50 deep, all the companies equally drawn up right in front, or rather, as this is of no consequence, drawn up at pleasure.

The advance of a brigade to an action would seldom take place in war on one road; each regiment follows its own road, or rather its order of march; the companies according to their number in sections, one in rear of the other. By these means a formation will be dispensed with, which

is a matter of detestation to the officer and soldier, and that is the drawing off by ranks or sections from the head of the column. A more harassing and unhandy formation is not conceivable. The companies have their distances one from the other, and the battalions double as much. The close locking-up whereby it is sought to diminish the length of the column of march, and thus the time of drawing up, has a totally opposite result. It tires the troops in an incredible manner, brings them at any moment to a halt, leads to confusion, and thus throws away both time and strength. It is quite a matter of indifference whether the rear companies are drawn up some minutes later or not. What officer would ever maintain that in the first moments of the battle he would require his last company. If, contrary to expectation, only one road should be at the disposition of the brigade, the battalions of the two regiments follow one another, or the battalions alternately. On such a march it is quite unimportant that the command should appear to be broken up.

If the brigade advances into the line of battle, that is, if it comes to within 2,000 paces, or within the first operation of the enemy's artillery, it should endeavour to paralyze its effects. We have, up to the present time, not had much opinion of the effect of artillery, and now, therefore, we are easily inclined to do too little to paralyze its effects. Nevertheless, we must take into consideration that, with a greater tactical education, there can be no more convenient target for

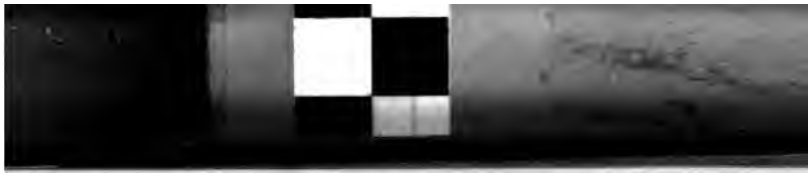
the artillery of the defence than dense infantry masses at about 1,800 paces. The distance can, by means of good maps, be estimated to a pace. On the other hand, the infantry has it in its power, by formations adapted to the purpose, to make itself so illusory to the artillery that they will scarcely ever be able to find a mark worth mentioning in the force of the assailant. The brigade will draw up and occupy about the extent of front which is fixed for it to engage. This, as a maximum, will be about 800 paces. Four company columns of each battalion will march as nearly as circumstances will allow, side by side, with about 50 paces interval—the three battalions with about 50 paces distance, one in rear of the other. This is nowise a battle formation, although one may be formed out of it at any moment; but rather a mere formation for the purpose of paralyzing artillery fire. The small bodies of troops would vanish every moment from the eyes of the hostile artillery and again appear; they would utilize every cover afforded by the ground, and gain ground quickly. To fire in about the direction in which the infantry is known to be thus advancing would be too costly an expense of artillery ammunition.

For the same purpose, instead of drawing up the companies one by the side of the other, they may be posted by two and two, one in rear of the other. It is not necessary that this form should be servilely followed. If the conditions of the ground do not admit of such a broad front, or if

better cover is to be obtained by advancing in a closed form, or if the operation of the artillery, against expectation, makes such precautions superfluous, it is always in our power to adopt a more convenient formation; but such chances should not be reckoned on beforehand, for, were they to fail, a very critical confusion would be the consequence.

A fourth point would be the taking up the battle formation, and the first commencement of the fight. This would have to be done at about 800 paces from the enemy. The direction of the attack, as well as the whole situation, is already fixed by the course of the battle which is in progress. The task of the brigade is to bring to a conclusion the action which has already commenced. Both the officers commanding regiments receive their orders for the attack. The two foremost battalions each send a company to the front; at about 100 paces behind these follow two companies, the fourth at about 30 paces farther in the rear; the two centre companies advance deployed; the two second battalions follow at about 100 paces in the rear; the four companies in two lines with 50 paces distance: the two third battalions at the disposition of the Brigadier 200 paces behind this; and the two foremost companies dissolve into a line of skirmishers.

Then follows the first movement of the attack; the skirmishing line have posted themselves as near as possible to the enemy, say at 350 paces. The four deployed companies have formed themselves into an opened-out line at about 450 paces

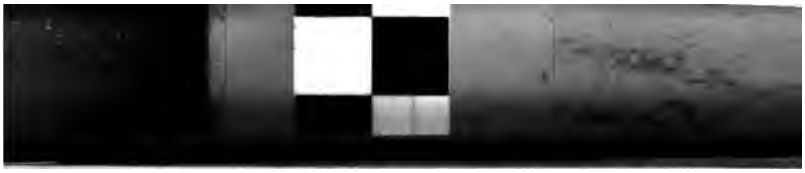


from the enemy, and have all lain flat down on the ground; 50 paces in the rear of this are placed the supporting companies formed in open column; the artillery fires when it comes within 1,000 paces on the point where it either knows or conjectures the hostile reserves to be posted. Then follows the quick fire of the skirmishers, the four companies get up and pass at the quick step through the line of skirmishers, and thus firing on the move against the enemy. Supporting companies follow; the artillery keeps up a constant fire; the battalions of the second line follow: with them are the officers commanding regiments, who each, according to the circumstances of the fight in front, either send forward or keep back these battalions. The Brigadier superintends near the two battalions of the third line. At 100 paces from the enemy the four companies destined to attack receive the order to charge; the fire suddenly ceases; they concentrate at the double, and rush upon the enemy. If the enemy stands the shock, supports immediately push forward; if the *mêlée* is indecisive, the second line advances to the attack. If the first line in front is repulsed, it rallies on the second deployed line, and again renews the attack.

It must be laid down as a maxim, that in all battle movements the formations, however simple they may be, can only have the purpose of carrying the troops in good order into the direct battle, and, when it is over, of permitting of their getting in order as soon as possible. During a battle every fixed formation ceases. In a *mêlée* it is always the

personal bravery of the leader, and firm cohesion, although in no particular formation of the individual bodies of troops, joined to ability in the use of weapons, which gains the day. If the shock of the first battalion succeeds, the following two are carefully held back from taking any direct part in the action, in order that they may be in a position to be employed as intact as possible in a further battle movement. The first deployed battalions will then follow up the enemy, who is giving way, and, either by their fire or the bayonet, prevent it from rallying. From this it follows that it would be disadvantageous, instead of placing the battalions one in rear of the other, to allow them to fight side by side, and thus to send two companies from each into the first line; for in this case two tactical units would be mixed up in the battle, and thus broken up. The two half-battalions left behind could not be compulsorily held back.

On the other hand, if the whole stream of the engaged four battalions were to be rolled back on the two reserve battalions, these could either, by means of their fire, form a rallying-point, or take the offensive, and thus, by a charge on the flank of the pursuing enemy, bring them to a halt.



CHAPTER XIV.

General characteristics of attack and defence in the future.

We cannot entirely give our adherence to the view that the attack on a position which is defended by breech-loaders will, in the future, be totally impossible. We should not suffer ourselves to be deceived by the unfavourable example of the Austrians, as this may be ascribed essentially to their tactical unwieldiness, as well as to the feeling of inferiority, which made them distrustful in presence of the far superior arm, which must have had a depressing effect upon them. Their attacks were never well prepared, well led, or carried out with any unity of action. With all the excellence of their artillery in defensive positions, it failed in its offensive operations preparatory to an attack. Thus all their charges gave the impression that they were sudden suggestions to seize an apparently favourable moment. A prudent utilization of the ground, good preparation, proper tactical forms, and energy in execution, might lead to expectations of success. The finer the *nuances* of the ground, the more it requires the sure *coup d'œil* of an officer who possesses a born talent. He who has not got this eye for the ground, or who feels uncertain about it, is scarcely the man to lead troops.

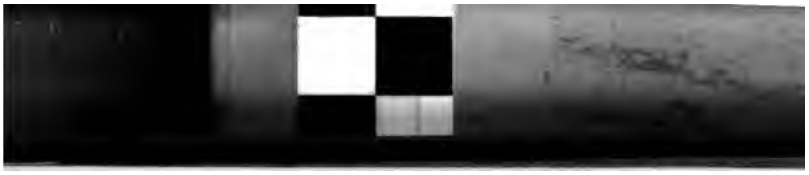
The artillery will be one of the most weighty factors which must play a most decisive part in the battle of the breech-loader. The activity of

the artillery must pervade every single movement in the fight. Its insufficient tactical education certainly accustomed the infantry to think lightly of its co-operation, and still more lightly of its antagonism. Yet still the consciousness existed of the necessity of artillery operations; and this was shown not so peculiarly in the fact that more tactical flexibility was required in that arm, but rather in the propositions for a mixed armament—that is, the adoption of regimental guns. There lies in such propositions a mistrust of our own artillery, as well as a conviction that artillery cannot be dispensed with; and for this reason, in order to make sure of them, it was thought best to keep them close at hand.

As to the relations of artillery to the attack and defence, we cannot here further examine into them; but we may perhaps assume that, by a proper tactical employment, the assailant can draw more advantage from artillery that the defender; but only in so far as it offers itself as an element to paralyze the defensive power of the arm.

There appears in many quarters an inclination to hold the view that generally, in future battles, deep positions with narrow fronts are indicated, since the unassailableness of the front will constrain the opponent to endeavour to turn the flanks of the enemy, which movement could only be met by such a formation. This view appears to be only partially correct.

Turning and flank attacks are not only perilous to the party attacked, but they have a most ques-



tionable side for the attacking party. Without necessity, and without some actual reasons, no one makes use of them. The defender can either desire to fight, or he can be forced against his will to do so by his assailant. It is only in the last case that the assailant usually has a strategic preponderance, which allows him the choice of turning the enemy. In both cases, the new arm affords the greatest advantage to the defender in enabling him to assume a disproportionately extended line to the front with small forces. Even weaker detachments, without support on ground capable of defence, cannot now be overpowered without further ceremony. The assailant, as he well knows, finds himself checked in a manifold way by such extended and thinly-occupied fronts. These operate so as to make flank attacks or turning only possible by means of long circuits. To do this requires time, and the troops must be divided, which may often bring them into a most critical position, if they happen to be opposed to a General who is a clever strategist.

On the other hand, the assailant, though he is aware of the proportionate weakness of the front line, at the same time well knows that if he decides on a serious assault on one point, the reserves of the defender have time to assemble there in perhaps preponderating masses. Thus he must endeavour to act by surprise; he also will push forward a long thin line, in order to occupy the attention and deceive his opponent, and will concentrate his main force behind it, and make a

sudden assault. He may then hope to annihilate a considerable number of the enemy before his main reserves can be fully concentrated on the decisive spot.

Hence the task of the assailant is to occupy the attention of the enemy's line, to push forward by surprise a powerful body to an assault on one point, or, should he have a strategical and tactical superiority, to make a sudden flank attack while showing a firm front; that of the defender, to observe the enemy by means of a wide-extended front, his main force being concentrated at one point in the rear. The defender should also endeavour to judge correctly, by taking his views from the action in front, and thus to estimate truly the distribution of the enemy's forces and its purpose. Should the enemy appear to be detaching a party for the purpose of turning the position, he might employ just a sufficient number of his force to arrest the movement, while at the same time crushing the remainder with an overwhelmingly superior number. If his front should be attacked, he should try to gain the advantage of the situation by a rapid concentration of his force.

A defender cannot expect any results from an obstinate local fight, inasmuch as the assailant would studiously seek to attack the reserves in the rear, and by their being forced to retreat, the holders of the strong position would be placed in the worst possible situation. Many such examples occurred in the Campaign of 1866.

What we have here laid down will equally apply

to the defensive fights of brigades. If the point of a hostile attack is correctly perceived at a proper time, while the enemy's brigade is being pushed forward against the hitherto thin line of the defender, he should also push forward a brigade to maintain the attacked position. The brigade may consist of merely four battalions; then both the battalions of the front line should be destined for the direct defence of the front. Each should form a wing of about 400 paces, and each deploy two companies into an opened-out line, which may be posted so as to take advantage of the ground, in order to be as well covered as possible. The two other battalions deployed should post themselves at from twenty to thirty paces in the rear. The two battalions of the second line take up a position on the wings, which is the most favourable place for an offensive movement. Each subdivision of the deployed companies opens fire at the enemy when he has advanced within 400 paces, at 200 paces "quick fire," or if it is possible and judged to be requisite, volleys by subdivisions. If this does not check the enemy, the supporting companies at 250 paces open fire over the heads of the companies which are lying under cover before them, or they fire volleys. If the enemy still advances, at the moment of contact the two supporting battalions fall on the flanks of the assailant and endeavour to hurl him back on his reserves. Should these also be repulsed, there is nothing left but to go *pêle mêle* to the right-about, and wait for another chance from external circumstances.

CHAPTER XV.

Conclusion.

From the whole of what we have said, it may be concluded, that the manner of fighting which we have described is only possible with disciplined and well-instructed troops, led by clear-headed and energetic officers. It is not so much the material arm which gives a preponderance as brain-work. Mere bravery is of as little use as mere proficiency in musketry. There is something ennobling in the feeling that it is not brute force which is decisive, but rather true military qualities, which an army can only obtain by uninterrupted and zealous efforts, or a people by a healthy course of development of its material and spiritual life.

When two armies meet each other on the battle-field, in most cases the victory is not a work of chance, or of the faults of this or that General. Both armies already have in themselves the germ out of which victory or defeat is to be developed. Inefficient officers are no accident, neither are they a reproach to the army; but they are a proof that the organisation of the State is so decayed, that not public, but rather personal considerations of the most base description, operate decisively in the most important matters. Inefficient officers afford a proof that the State does not possess that internal healthiness which would enable it to eliminate decaying matter by a natural sound course of development. In a healthy State every one knows

what an important support the army is to the development of the whole organism, and that in times of danger it is the decisive point. He knows that the welfare of the State ought only to be entrusted to efficient officers, and that the public esteem or contempt of the individual and of the whole body must have a purifying effect, even though it should be indirect. Inefficient, cowardly, and effeminate soldiers prove that the common people have no longer any sound pith left in them, that they are poisoned by sensual vices, or degraded by material misery. However highly the work of the officer who has the formation of the army is estimated, the best and most valuable part of an army emanates from the healthy power of the nation; as also do the corps of officers, who, pick them as you will, are after all nothing more than the expression of the nation in a certain direction.

Two armies and two nations in an equally sound stage of development seldom stand in hostile opposition. Every war is a powerful operation on a spot beginning to decay; but the decay is generally more deeply seated in the body of a nation than at the point which at last makes an operation necessary. It crops up in all classes of the army, and bad leaders, a bad spirit, and bad material are its outward and visible signs. True warlike ability first shows itself in the hour of battle. Before this trial, however much we may prove and weed out, the inefficient element will always permeate, that is, the element which is only fitted to answer the purpose of the lower grades and which would

be totally unfit for the higher requirements. He who, instead of speculating theoretically, is obliged to act practically, would very soon see that in practice, not only ideal requirements would not be fulfilled, but that we may be very well satisfied if that which is done be only mediocre and just sufficient for the purpose.

The whole difficulty of working practically lies in the fact, that the agents we have at our disposition never answer to ideal requirements, and that we must know them in their weakness in order to prevent such weakness from interposing disastrously. If leader and soldiers were of an equal excellence, victory would be no merit in a General; but neither leader nor troops ever reach the highest requirements. If we would come to consequent conclusions, theoretically, concerning the continual improvements in firearms, we might finally ask the question, whether at last a single man would be left alive in the world? It would appear as if all, both root and branch, would be annihilated. But practically, matters are very different. The numberless accidents and the insufficiency of human nature have their influence, and give the bias to victory and defeat. There is a mediocre average which is quite enough to work with; to descend below which would be attended with the greatest danger. Theoretically, the highest aim must be demanded, in order not too soon to fall into self-complacent contentedness. Practically, we must be contented with mediocrity. A healthy national development will always produce

distinguished men above mediocrity, who would instil life into the otherwise stagnant elements. Our time, as has often been said, is not poor in men of character. The great occasion will find its great man, and a people able to appreciate him. Such men are a product of the nation, and only possible through the nation. In them lives a consciousness of that, which the whole unconsciously fulfil. They will bring the spirit of the nation to the same consciousness which they have themselves imbibed from it, and so long as a nation thus shows a sound development, it has always a Future before it.

BY THE TRANSLATOR.

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MILITARY MAXIMS SUGGESTED, OR EXEMPLIFIED, BY THE LAST AUTUMN MANŒUVRES OF CONTINENTAL ARMIES.

A LECTURE DELIVERED AT THE ROYAL UNITED SERVICE INSTITUTION.

(Authors alone are responsible for the contents of their respective memoirs.)

(For private circulation only.)

LECTURE.

Friday, March 18th, 1870.

GENERAL THE HON. SIR EDWARD CUST, G.C.L., K.H., &c., in the Chair.

MILITARY MAXIMS SUGGESTED, OR EXEMPLIFIED, BY THE LAST AUTUMN MANŒUVRES OF CONTINENTAL ARMIES.

By Colonel C. CAMERON SHUTE, C.B., Commanding 4th Dragoon Guards.

ADDRESSING as I do an audience many of whom possess the experience of much actual service, I would commence this lecture, which will consist of little more than mere practical remarks suggested by the tactics of a practice campaign, with two short quotations from Hozier's "Seven Weeks' War."

"The following is an extract from a General Order of June 17th, "1866, issued to the Austrian Army just before taking the field:— "'In consequence of a long course of years of peace, the enemy does "'not posses a single General who has had an opportunity of learning "'his duties on the field of battle. Veterans of the Mincio and of "'Palestro, I hope that, with well-tried leaders,' &c. Yet on "July 23rd, within thirty-six days from the date of the above, "when the Austrian Army was utterly prostrate, the following was "the admission:—'Your needle-gun may be a terrible weapon, and "'we know by experience how well it shoots, but it has not been so "'bad for us as your Generals, who have a diabolical power of "'manœuvring.'"

Where, I would ask, was this "diabolical power" attained, if not at the admirably conducted autumn manœuvres of the Prussian Army?

At these campaigns I have now three times been present (and I would say, by the way, have on each occasion been most hospitably received); and it is on them that my present observations will mainly be founded.

I have once visited the French, Austrian, and Russian Armies on similar occasions, but have there witnessed rather a succession of "field days," than, as in Prussia, strategically and tactically speaking, "real, tho' bloodless campaigns," in which, moreover, one's observations and

judgment were materially assisted by an admirably organized system of umpires. One of these umpires is employed at each important point of the field of operations, and their Director-General, if I may so term the officer of rank who superintends the whole, has with him some assistant umpires, one of whom he can detach to observe any contest where some unforeseen cause for arbitration is likely suddenly and unexpectedly to occur.

The umpires are officers of practical field experience, carefully selected from regiments not forming a part of the forces engaged, and capable of impartially deciding what, in each case within their view, would have been the result had actual collision taken place; they are empowered to direct any one brigade, regiment, or squadron to retreat —to retire from action for a given time, and to a given distance, as if to rally,—or altogether to leave the field, according as defeat may be, in their opinion, partial or complete.

The umpires-in-chief have an influential voice in settling, after the daily manœuvres, what positions each army, with reference to the operations of the day, may fairly be permitted to occupy for the night.

They have, during the morning, carefully to watch the action of the whole of the forces engaged, deciding, if doubtful, when the general retreat of either force to a new position, would, in war, have become essential to its ultimate safety; when, for instance, its communications have become seriously threatened; when one or both flanks are fairly and unquestionably turned, or its flank and rear advantageously attacked by the enemy without his compromising his own communications, &c. These questions require considerable practical knowledge and experience for their fair and speedy settlement, and become constant subjects of arbitration in an army whose rule is invariably to combine flank with front attack, practising the system on every occasion, whether it be at the largest of manœuvres, or at the smallest and most common-place of field days, sometimes even when it may be hardly prudent or justifiable.

I had a special opportunity of observing this invariable system of flank attack from having been fortunately induced by Major-general Dalrymple White to go to Berlin ten days or a fortnight previous to the commencement of the greater manœuvres, to which we English officers were so cordially invited. This gave us the advantage of seeing a succession of large field days on spacious ground, in which all the principles of modern Prussian cavalry manœuvre, by thirty-eight squadrons, with three batteries of artillery, were more clearly exhibited than could possibly be the case even in a peace campaign. I cannot, perhaps, do better than read to you part of a letter I wrote, on the spur of the moment, to a friend in England:—

" In our very enclosed country, with an extremely jealous agricul-
" tural population, and ridiculously small parade grounds, our ideas of
" manœuvre become as confined as our space, and many consider it the
" chief proof of military ability to be able to handle the largest possible
" force in the smallest possible space: totally ignoring my favourite
" truism, 'ground means tactics,' they will 'box the compass,' at every
" field day; hence the non-pivot system, which, supposing an enemy

" could arise, as at the wave of a wand, simultaneously at every point, " would no doubt be extremely desirable.

" But here the main consideration, and particularly with cavalry, is " to occupy as much ground as can possibly be occupied by any given " force with safety and effect.

" With this object, all supports are in echelon, and often at a slight " angle to the first line, so as partially to be on the flank of a suc- " cessful enemy.

" It is a rule, in every attack to the front by a brigade or regiment, " that the enemy should be charged on one or both flanks nearly at " the same time.

" Thus, an officer commanding a regiment or squadron, who finds " himself in a position to do this, would be expected to do so on his " own authority and responsibility; but in general, an officer com- " manding a division or brigade so forms his force, that a front as well " as a flank attack can be made together.

" Their advances in line, which are the chief object of all cavalry " manœuvre, are good, from the officers leading so well both as to " direction and pace; and when they terminate with a charge, it is short, " sharp, and effective.

" A frequent formation for manœuvres, is squadron columns of " pelotons, with full, half, or quarter intervals between the columns, " according to circumstances—an admirable formation for moving over " all sorts of ground, or passing obstacles, and from which a line to " the front or flank is very quickly and simply formed.

" There is only just skirmishing enough done to feel for an enemy, " or to ascertain his line of retreat, and as few men as possible are " employed; but, partly with a view to obtaining intelligence, the " skirmishers are always accompanied by an officer.

" In all advances over unknown ground, one man a squadron rides " about 250 yards in advance of the line, or line of columns, to ascer- " tain that the ground is safe for cavalry, as well as to watch the " enemy. If attacked, they gallop in at once. In the case of a single " column, one or two of these men on *reconnoissance* ride in front, and " two on the pivot flank.

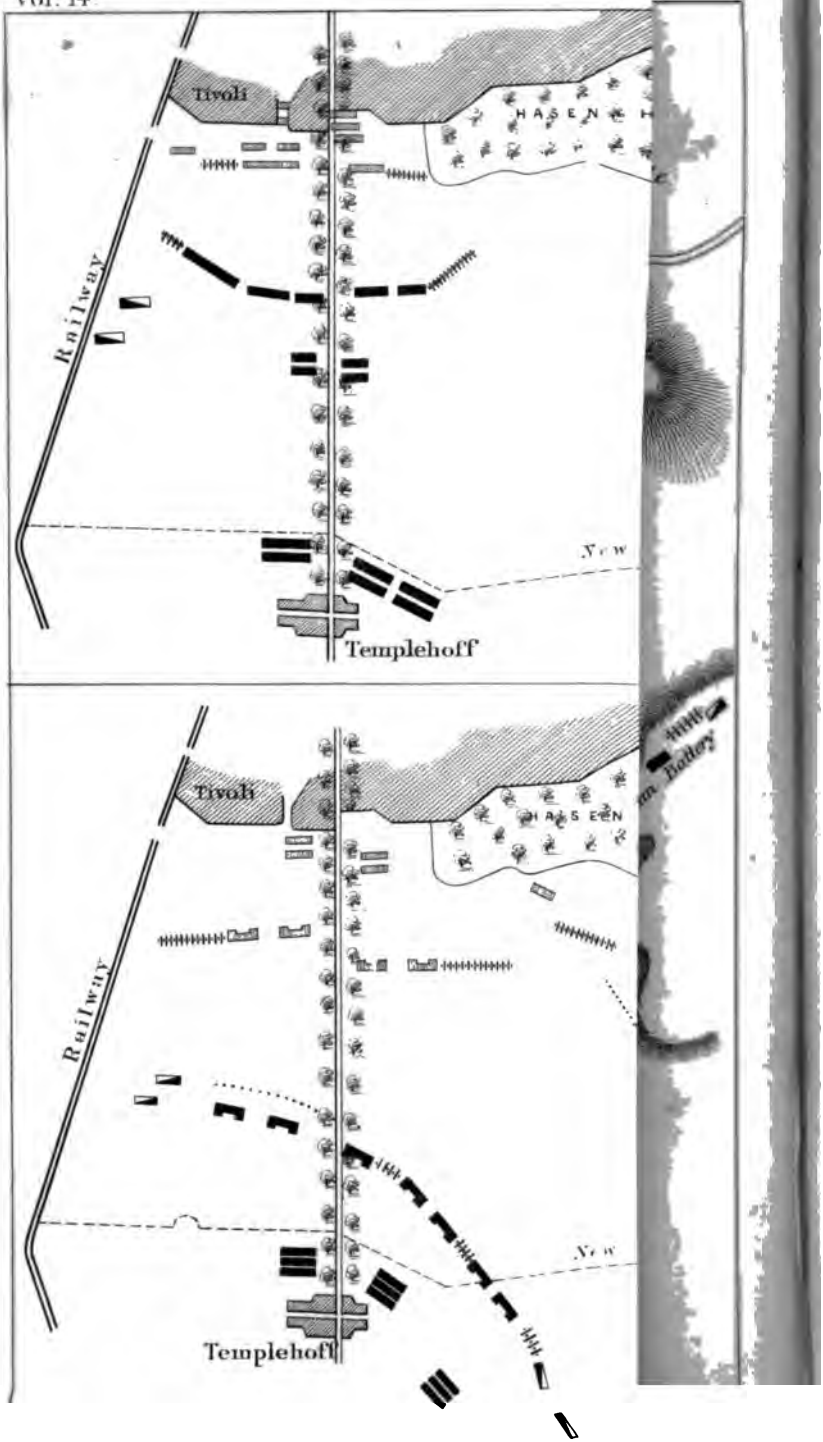
" In most instances, skirmishing in large numbers is simply a waste " of horse power.

" One charge was made to-day in exactly the same formation as " that in which our heavy brigade was attacked at Balaclava. The two " Cuirassier regiments were in line of contiguous quarter columns in " the centre, with a Dragoon regiment deployed on either flank in a line " with the serifile rank of the rear squadrons of the columns, so that " they would take in flank any cavalry attacking the flanks of the " columns.

" Though the centre of this formation would be very vulnerable to " artillery, it is thought by some that against cavalry alone, on con- " fined ground, it would be irresistible.

" The artillery is invariably so placed as to bring an oblique fire on " the enemy, and so that this fire can be kept up until actual contact " between the two lines takes place.

Pl.


Tivoli
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Artillery once occupying a good position remain there as long as
ssible, as it is argued that, with the present arms of precision and
ng range, when once the exact range is obtained, it is better to
ep it, instead of galloping about from position to position, as
as necessary with smooth-bores. In pursuit, however, the
tteries are pushed on as far and as fast as possible. On
her occasions, the guns are kept rather to the rear, and only
rnished with escort when above 500 yards from the general line of
valry."

Have here well-written descriptions of each of the field days to
ch this letter refers, with an eye sketch of the ground by Mr. Russell,
.C. to Major-general White. The field days were conducted
inst an imaginary enemy; and I looked forward with the
test interest to the larger manœuvres to ascertain how the
petual system of flank attack which we had witnessed could
arried out against an enemy equally given to the same system, and
, with well placed echelon supports and reserves, should be able
ake in flank those who were so attacking a first line; for flank
ck is best met by counter-attack.

hese cavalry field days were followed by one of much greater
rest, in which the whole Guards Corps, consisting of 38 squadrons
avalry, 27 battalions of infantry, 6 horse and 10 foot batteries were
aged; here, again, the advantages of well-arranged flank attack,
e admirably exemplified.

he previous days had, as I have said, been so arranged, as to
onstrate *a perpetual* system of flank attack, while this last showed
great flank movement applicable to a general action.

he idea was, that Berlin was threatened by an enemy occupying
village of Templehof, with a line of unfinished railway embankment
ront of it, crossing the great main road between the two places at
t angles.

he forces were unequally divided, particularly in cavalry, that
upying Templehof being the weaker, and this latter it was decided
ttack.

he Berlin force advanced with this view by the road above men-
ed, which was flanked by the usual poplar trees; and as soon as
head of the column was clear of the outskirts of Berlin, the ad-
ced guard, composed of two battalions, a squadron of cavalry, and
e guns, deployed to the right of the road, and pushed on about
f-way across the plain between Tivoli and Templehof, the squadron
cavalry trotting on to reconnoitre the village.

he main body deployed about 800 yards behind the advanced force,
ing its right protected by a railway, and its left by the wood of
sen Heide (*vide Plate*).

fter some fighting, the enemy drove in the advance of the Berlin
e, which retired skirmishing, on the main body. Encouraged by
s success, the enemy strongly reinforced his advanced troops, and
de a very determined attack on the Berlin army, which had how-
r detached a strong force (including nearly all the cavalry and
se artillery) by a road which, about half-a-mile to the rear, branched

off to the left, and issued into the plain about a mile and a-half to the left front of the position, and where the action was now fiercely raging. A very long, and very gradual, indeed almost imperceptible roll of the ground was just sufficient to hide this force until it was deployed into lines of battle, and had advanced; the enemy then found that the line of embankment and village of Templehof were turned by a strong force that had in no way compromised its own communications with Berlin, and he was thus obliged to bring all his reserves into action to the right, whilst the Berlin cavalry and horse artillery had already extended so much to the left as almost to command the main line of retreat from Templehof.

It will be observed that this was a perfectly safe flank movement, for that portion of the Berlin army first engaged, was so strongly posted that it could have held out for some hours against double its strength; both its flanks were well protected, the ground intervening between it and the point where the flanking force issued into the plain was unapproachable, and the preparations for the flank movement were thoroughly screened from view, though an active cavalry should have discovered it before it was deployed and prepared to advance; in this description of force, however, the enemy was weak, and found employment for its squadrons on the other flank, and in reserve. The admirable marching, great endurance, and perfect steadiness of the energetic-looking young infantry, all between the ages of twenty and twenty-five, were very striking. I did not observe the slightest sign of fatigue after long hours of manœuvre in mid-day heat. There was no falling out for a drink of water, as each man of course had, as every soldier should have, his water bottle at his side; this, since Major Cochrane's serviceable invention, will I trust no longer be withheld from our men of all arms.

The quickness with which the officers selected the most trifling inequality of ground to hide and protect, wholly or partially, the troops under their command, on a plateau which at first sight appeared a dead flat, was most remarkable.

In a very open bare country, since the introduction of breech-loading arms of precision with long range, it has become a first necessity, particularly for artillery, to select each of its positions with some reverse slope, however slight; quickness of eye in this respect cannot be attained without frequent practice, but it is only by such means that the demoralizing "spade" can in a degree be dispensed with.

The difficulties of front attack have become very formidable, modern armaments having so increased the power of defence, that it is doubtful if the finest infantry in the world could drive an enemy from a good position covered by walls, banks, ditches, &c. (unless such shelter could first be nearly destroyed by heavy artillery fire), excepting by turning his flank; and—unless the attacking force be very superior in numbers, and have its centre strongly posted, as a check to counter-attack—it is necessary to success that the concentration and preparatory movements for the flank march should be screened from view, and that the troops should have good marching powers, such as the Prussian infantry, unquestionably, in a high degree possess.

I have troubled you with a detailed account, somewhat tiresome, I fear, of a mere ordinary Prussian field-day, because it so successfully illustrated maxims which were further exemplified on a much larger scale, and under many of the difficulties of actual warfare, in one of those practice campaigns in which the Prussian army and its establishments obtain nearly all the experiences of field service, as to supplies, carriage, field telegraphs, bivouac, out-post duty in every variety of country, patrolling both for safety and for intelligence, reconnoissance (in force, or otherwise as the case may require), passage of rivers, streams, marshes, &c., and the defence, occupation, and attack of woods, temporary field-works, &c., &c.

No private property or crops are allowed to interfere with the proper occupation of a position, or the movements of troops, damages being afterwards fairly assessed: though in villages, farms, &c., the men stand against the outer walls of the houses, which cannot of course be occupied or loopholed for defence; nor can roads, railways, and bridges be destroyed.

Most valuable as these manœuvres are to every one engaged in them, from the General to the private, they are hardly less instructive to the looker-on; for I think that a fair practical soldier, well mounted, and map in hand, may on many points form as just conclusions whilst watching these manœuvres, as from actual warfare, particularly when it is remembered how little an officer can see in action beyond his own division or brigade, and the difficulty experienced by military writers in obtaining correct accounts of the commonest details of an action. How many faulty maxims and conclusions are often deduced from utterly false premises, for example, the "thin red line" at Balaclava, and many other instances within our personal knowledge.

Having thus far shown how much the system of flank attack is inculcated, and how it is advantageously carried out on the minor occasions of little more than ordinary field-days, I will now quote from the Prussian practice campaign of last autumn, and from actual wars, two or three instances of failure as well as success (time will not admit of more); for though the flank attack opposed to an enemy wanting in confidence and dash will rarely fail, and throwing troops on to the enemy's line of communication, renders close pursuit, easy, and converts defeat into utter rout, still there are certain conditions which may lead not only to failure, but to a serious reverse.

I will avoid any detailed accounts of the manœuvres of the Crown Prince's corps of the Prussian Army in Pomerania, as the admirable letters sent to the *Times* by two most able military writers can hardly be forgotten. I will, therefore, merely remind you, that that corps was divided into two forces, the one under Lieutenant-General Hahen, called the "Army of the North," supposed to have landed on the coast of Pomerania, and blockading the neighbouring fortresses and occupying Stargard; the other, commanded by Lieutenant-General Von Werder, and called the "Army of the South," which had advanced from Berlin to the Ihna to oppose him.

The first and last days of these manœuvres are the two which I should quote as showing, that, with forces nearly equal, the detaching

largely to make a wide flank movement is attended with much danger, unless the centre and other flank are very strongly posted, and the design can be hidden from the enemy.

On the first day, the Southern General, intent on turning General Hahn's left flank, with a view to cutting him off from his communications with the coast, extended his force so much, that he was ultimately, in the opinion of the umpires, out-numbered at almost every point of attack.

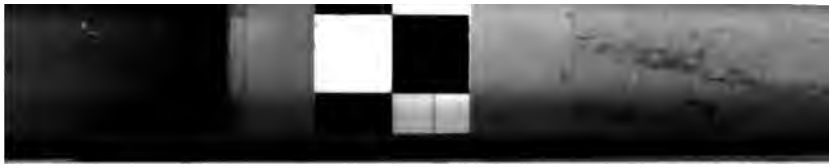
On the last day, the Northern army had retired behind Pansin, and its position extended across the main road leading back to the coast, and communicating with Stargard, whose garrison it was about to withdraw. Its front was covered by a long, wide, deep, boggy ravine, running for some miles to the right, and it could not be turned in that direction. The most feasible passage was in the left centre of the position, but this was thoroughly commanded by a long high hill, which, in fact, was the key of the position, though it was from the first evident that if the enemy could secure some heights on the left rear, at about a mile distant, this important part of the position would be untenable. To effect this, however, after the attack once commenced, the southern Army must detach largely to its right, marching its columns within view, by narrow roads through some dense woods.

The Southern army having made a strong feint against the Northern right, now made three determined attacks on the hill above mentioned; as this, however, was defended by shelter trenches, and two improvised redoubts, the assaults utterly failed; but just before withdrawing from the last attack, we could plainly see some of his troops massing on his right, with the evident object of making a flank movement in that direction, and shortly after saw a large portion of his force moving in columns into the woods, and it was when his centre was thus weakened, that a bold counter attack by the Northern army might have won the day. Instead of this, however the Northern general prepared to meet the flank attack, and was ultimately considered to have been defeated.

Most flank movements are best met by counter-attack, though there is little risk in attempting a turning movement, when the attacking force is considerably the stronger, and when its centre is securely posted. But it is always an object that the concentration and movement of troops for the purpose, should be hidden from view by a reverse slope, or be masked by some obstacles.

Blucher's position at Ligny was faulty, from his reserves being visible to the enemy. Napoleon was thus able to discover his gradual withdrawal of troops towards his right, with the intention of attacking the left flank of the French; and availing himself of the undulating ground occupied by his troops, he moved his powerful reserve unobserved towards the lower extremity of the village of Ligny, and when the Prussians were fully compromised by the flank movement, vigorously attacked their weakened centre with eight battalions of the Guard, and their artillery, and eight regiments of Cuirassiers, which at once decided the day.

At Langensalza, General Flies having first made a feint with a small



column against the Hanoverian right, then endeavoured to turn their left, and thus to threaten their line of retreat,* but in this way so weakened his general line, that the Hanoverians, seizing the opportunity, attacked his centre and defeated him; but pursuit was much checked by the river Unstrut, in front of the Hanoverian position, being only passable at three bridges, one at Thäuesbrüch, on their right, another at Merxlchen in the centre, and a third at Nägelstardt on their left.

Any one, however, who has read with care the accounts of the late campaign in Bohemia, will have observed how invariably the Prussians there carried out with success, on every minor as well as on every great occasion, the principal of flank attack, so much inculcated at their autumn manœuvres.

General von Moltke, sitting in the War Office at Berlin, with two telegraphic wires at his command, was able, so to direct from day to day and hour to hour, the movements of his widely separated armies as not only to prevent their being beaten in detail, but to convert what would, without such means, have been a stategical weakness into the great tactical advantage of throwing the second army on the right flank of the Austrians at the moment when the first army, which had attacked injudiciously early, was actually making cavalry preparations to cover its retreat. Though I admit that, after a careful inspection of the ground, I cannot conceive anything more discreditable to the Austrian cavalry than the surprise of the key of their position at Chlum, added to which, a very few thousand men could have with ease seriously delayed the second army, both in its passage of the Elbe, and its advance in sundry columns by the narrow, steep roads leading up the high, thickly-wooded bank of the valley of the Elbe, towards the plateau of Daubrowitz, rendered deep and muddy from recent rain. Last, though not least, I must mention Blumenau, the final action in the campaign, and in the midst of which, in consequence of the armistice, "Cease firing" was sounded. Here the forces were about equal, and great was the surprise of the Austrians when, after the termination of hostilities, they found that Prussian troops had not only turned their right flank, but were actually drawn up across the only line of retreat for their artillery, they then honestly acknowledged that they had been saved from a great disaster. It was on this occasion that Hozier tells us that an Austrian officer of distinction said to a Prussian the memorable words with which I commenced this lecture:—"Your needle-gun may be a terrible weapon, but it has "not been so bad for us as your Generals, who have a most diabolical "power of manœuvring."

I will now remark on the three arms in succession, adding a few notes on shelter-trenches, field telegraphs, and the practical instruction of officers of all ranks.

* General Flies' force consisted of about 12,300 men, but having detached five Landwehr battalions for this flank movement, his centre and reserve was reduced to about 8,000. This is taken from a French account, and from "Hozier."

Infantry.

Notwithstanding the prejudices of the older infantry officers of other nations, and their arguments as to the great waste of ammunition that would occur, the impossibility of renewing the supply in action, &c., &c., the truly military Government of Prussia had, so far back as 1841, the boldness and foresight to adopt breech-loading arms, and thus became twenty-five years in advance of every army in Europe. The alarm created by her successes in Bohemia at once led to breech-loading arms being everywhere hastily adopted; but though the far-famed needle-gun has been fairly distanced, whether as regards weight, range, or penetration, the Prussians have the advantage of a quarter of a century's experience in its use. They had adopted means of getting up a ready supply of ammunition when required, and drill restrictions to check its expenditure, excepting on those very important occasions when, on its free and liberal use, the fortune of the moment might depend. Their arrangements on these important points have been the result of not merely home practice and manœuvre, but of the two minor campaigns in Baden in 1849, and Schleswig-Holstein in 1863, and lastly, in those crowning victories of 1866, which have made their country the first military nation, and the most powerful empire, in Europe.

Yet, though the first to adopt the new armament, the Prussians have, in consequence, made fewer radical changes in their infantry tactics than either the Russians, the Austrians, or the French; the two last appear to have pushed to an extreme, the principle of thin and extended lines, with no compactness, and little order.

The longer service, so firmly insisted on by that noble old soldier, their much-loved King, has so improved the physique of the infantry since I saw them in 1846, that they have been able to attain one great necessity of modern warfare, viz., untiring celerity of movement; and this without sacrificing their old solidity.

They have only slightly modified their former depth of formation by the partial deployment of their columns for attack and in line of battle.

The lines of skirmishers can, however, with the needle-gun, deliver a most formidable fire, whilst constantly availing themselves of protection during their quick and determined advance; and can thus most effectually cover their columns and reserves almost up to the point of attack.

Of the skirmishing battalions, usually one-third only of each of the four companies is extended, the other two-thirds being in a column of pelotons in rear of them, which column avails itself of every accident of ground for protection and concealment; this is a simple and effective mode of extension, and is comparatively safe against cavalry attack.

The second line usually follows also in four company columns of sub-divisions, with full, half, or quarter intervals between the columns, according to circumstances, and frequently, in the former case, with the two centre or two flank companies deployed, the battalion being thus formed ready for immediate attack or defence.

This mode of advance is undoubtedly extremely mobile, and has the convenience of passing obstacles, &c., with unbroken facility.

These small columns are also able to take every advantage of undulations, and other protecting features of ground, and in a quick advance it is not easy for artillery to get their range.

To control the expenditure of ammunition, independent firing is almost limited to skirmishers and men under cover.

The Prussian battalions never have their colours renewed; old regiments are proud of having little left of them but ribbons on which their battles are embroidered. The advantages of this are, that they are light to carry, difficult to see at a distance, and thus form no guide to an enemy to judge of the number of battalions in a column or position, and are not a very prominent mark to draw a concentrated fire in action on Officers and non-commissioned Officers in charge of them. In truth the colours are no more necessary to a line regiment than to the Rifle Brigade, and one or both should be dispensed with.

The mode of expansion for war is to increase each company up to 250 men, and battalions move much in company columns of pelotons with deploying, half, or quarter intervals, as before described. The captains are allowed horses, and being thus less subjected to fatigue, are better able to look after their men; the horses are usually held by an orderly some little distance to the rear when the battalion is in action, or the ground is only suited to men on foot.

Varying the number of companies in a battalion in peace and war is an inconvenience, because of the sudden increase and decrease of officers.

Eight would probably be the best fixed number of companies—there are four in Prussia—as there would be two efficient wings of four companies each; for a similar reason, cavalry regiments should always have four squadrons each in the field.

Major-General Carey, correctly, I think, attributes the wonderful marching of the Prussian infantry, heavily laden, under a burning sun, over all kinds of ground, to the constant use of their knapsacks. A soldier cannot be too frequently in marching order.

The pouch is carried in front—a decided advantage in doubling, and in other respects; the spare ammunition is carried in the pocket at the base of the knapsack; the bayonet is permanently fixed; a short sword is carried, which adds to weight, without any great advantage.

The men carry about 70 lb. each, and during the manœuvres in Pomerania, must frequently have marched thirty miles a day, on sandy and fallow ground, under a hotter sun than we ever know at Aldershot; yet the constant remark I heard from English officers was, "Very odd, I never see a man fall out."

The Prussian infantry waste no time in practising parade movements. Though they pass their King with a sort of parade step, quick, and with a much bent knee, there are no foolish alterations in the positions of officers, non-commissioned officers, or ranks. The first and second in command only salute, the former turning round to the flagstaff, and the latter succeeding him in charge of the battalion. Drums of the leading regiment remain behind beating time, which the

band of the next regiment takes up, and so on in succession; thus, exactly the same time is maintained to the end of the longest column.

Men from 20 to 25 are little troubled with long beards, and short service in England will also dispose of that question, as well as of matrimony and pensions.

The staff of a general officer ride behind, and not in front of him.

The cavalry and artillery march past in the same simple, soldier-like way.

The English formal parade movements, general guard mounting, and trooping the colours, which take a vast amount of labour to teach to perfection, might well have gone out with powder and pigtails.

Prussian infantry officers, on all occasions of parade, wear small, light, black knapsacks, which are neat, and a great essential.

Their dress is simple and soldier-like, free from all the vulgarity of tawdry gold lace; the distinctions of rank are so marked, that even the youngest sentry cannot mistake them.

The sash (not that of a General Officer!!!) worn over the shoulder instead of round the waist, marks the combatant staff of the Army without the expensive necessity of a fancy tunic, not procurable on service.

They have light "small swords" with sharp, straight cut-and-thrust blades, not attached to long slings to dangle between the legs, but close fitting and with leather, and not steel scabbards to spoil the edge.

Artillery.

The Prussians have retained a considerable number of smooth-bore guns:* whether intentionally, or because they have not yet had the time or means to generally adopt rifle guns, is a question.

The very long range, penetration, and the extreme accuracy of fire, of rifled artillery, when directed against any special single objects, such as buildings, houses, churches, temporary earth-works, &c., is, of course, of the greatest advantage; particularly as, when there is no natural or artificial cover from small arms, it has become necessary that a battery in action should be from 1,000 to 1,200 yards distant from extended infantry; but it must be remembered that every shot that fails to strike its mark is simply lost, and that its moral effects are *nil*.

Nobody who has ever in the course of a slow, chequered, cavalry retreat, sat on a horse perfectly inactive and exposed to even distant fire from round shot,—when, like cricket balls, and nearly as visible, they come bowling along the plain, and, in their flight, either bounding over the ducking heads of his men, or crashing through the ranks, shattering everything they meet,—can for a moment question the moral effects of ricochet fire. The practical effect is still more fatal: for, missing one line or mass of troops, the shot roll into others

* Since writing the above, I have been informed that nearly all the field guns are now rifled, and being breech-loaders, I have avoided reference to shell or shrapnel, in consequence of the "fuze" difficulties, too long on this occasion to discuss.

and penetrate to the tail of a long column instead of proving fatal chiefly to the head, thereby rendering questionable the one great argument in favour of column-formations for attack, viz., that the rear divisions being uninjured, are ever ready to push on the leading files.

But against all this the fatal objection must remain, that smooth-bore guns cannot be efficient from a position beyond the range of modern rifles.

In Pomerania, the artillery was not manœuvred on the same principles as that attached to the Guards Corps near Berlin, but, instead of concentrating the fire in the very open country by a mere alteration in the training of the guns, they seemed to prefer the old system of concentrating batteries, which, with long range, seems a waste of *horse* power and occasions much loss of time. Added to this, it is difficult to find the great length of ridge or undulation required for a commanding and sheltered position for many batteries in line; and in case of advance or retreat, they are too apt, of necessity, to fall into one long column, rendering subsequent formations into line slow, the batteries hampering one another and blocking up a great length of road, the bridges, passes, &c., and impeding other troops or *matériél.*

A battery of artillery is best protected by a strong company or more of infantry, armed with breech-loaders. An instance,—too long now to describe,—occurred on the second day of the Prussian manœuvres, in which the umpire fairly decided that eight squadrons had failed to carry a battery in position so defended. In two or three instances, Austrian guns, with escorts of Lancers, were captured by Prussian cavalry.

The foot batteries come into action with their men neither fatigued nor blown, and are not obliged, in changes of position, to move slowly along at the infantry pace. This is effected by their having five men mounted on each gun, three on the limber and two on seats on the axles, which have a wire screen on the side to protect the men from the wheels, and an iron step for their feet; there are also saddles on the off-horses in case they should be required.

The fore-wheels of the Prussian guns and ammunition-waggons being of different sizes, entails the carriage with each, of two spare wheels, instead of one.

Guns considered as Trophies.

I would here remark that it is very unfortunate that field guns continue to be looked upon as the greatest of trophies; they are in consequence frequently withdrawn prematurely from action, even when their continuance in their position would occasion great losses to an enemy; and what I say, specially applies to artillery covering a retreat. If very full compensation for guns is obtained by the destruction they have occasioned, and by the valuable check they have given to pursuit, their capture is little to be regretted.

Serious loss has frequently been incurred for the sake of guns, with no ulterior or strategical object. As for instance, I may mention at Balaclava, where it was a question of not even field artillery, but merely of

six out of nine, iron 12-pounder ship guns, lent by us to the Turks, and which the Russians were supposed to be withdrawing from the redoubts they had taken. The general commanding the cavalry received an order. "Cavalry to advance rapidly to the front, and try to prevent the enemy from carrying away the guns." Supposing, then, for the mere sake of argument, that it was intended by this order and the other orders connected with it, that the Light Brigade should advance along the crest of the Causeway Heights instead of down the North Valley, and that the Odessa Battalion and other Russian Infantry occupying the redoubts, and in position in rear of them, had been weak enough to retreat before the advancing 600 Light Dragoons, it must be remembered that this line of height was enfiladed by a powerful artillery from the east and flanked from the north by batteries on the Fedukine Hills. The loss incurred for the sake of these six ship guns (not worth the same number of men and horses) must thus necessarily have been great, while success must, in any case, have been doubtful.

Britton, with two guns at Genappe, was another instance of a premature order to retreat, when a round of case, previously to the charge of the 7th Hussars, would have been most effective. It was on this occasion that when gallantly leading a portion of the 7th, Major Hodge was killed, whose son, Major-General Hodge, so long and so efficiently commanded my present regiment.

A first-rate general officer of artillery lately told me, that he considered that an enemy bought a gun dearly, who had first received two rounds of case.

Cavalry.

In Prussia, the cavalry alone is always kept up to the full war establishment, because, as all good soldiers know, it is an arm that cannot be extemporized, and for which it is impossible to have a reserve to fall back on in an emergency. It has been largely increased since the war of 1866.

The cavalry of Prussia consists of Cuirassiers, Lancers, Dragoons, and Hussars.

The first of these is treated entirely as a cavalry of reserve, and not subjected to duties that would be more effectively done by lighter troops, and which, by lightening the condition of their horses, would render them less powerful in a charge. The cuirassiers are fine men mounted on strong, but well-bred horses, and move quickly and well. The Prussians value them as much as ever; indeed they proved their value in Bohemia.

The Lancers are heavy, the Dragoons and Hussars light. The cavalry soldiers, being selected from the riding population, soon learn to be good horsemen, but they have not service enough to be able to turn out themselves or their appointments, or to give their horses proper attention, like our older soldiers; but though our little skeleton regiments are, as regards the individual dragoon and horse, very superior now, yet if augmented suddenly to a war establishment, as was

the case before the Crimean war, they would be inferior in every respect to those of Prussia.

The cavalry of an army should not only be as "eyes to its commander," but it should form an "impenetrable screen," behind which all his strategical and tactical combinations can be secretly and safely carried out.

The Prussian cavalry proved of inestimable value in 1866; this was the result of the admirable training gained in all their autumn manœuvres.

The safe issue of two of the Crown Prince's columns from the mountains into Bohemia was secured by his cavalry, particularly at Nachod, where the passage of the fifth corps depended entirely on the 8th Prussian Dragoons and 1st Uhlan Regiment defeating the Austrian cavalry, which threatened the flank of any infantry advancing into the plains of Bohemia. Ultimately, there was a considerable cavalry action.

Cavalry should be fully and well officered, the officers should also be good linguists. A Gazette may make a cornet, but it cannot make a cavalry officer.

No Prussian patrol to the front or flank, ever marches unaccompanied by an Officer of military intelligence, so that no opportunity of reconnaissance may be lost,

The Prussian cavalry constantly move in squadron columns of pelotons, with full, half, or quarter distance between the columns, according to circumstances. At a distance they appear to be creeping along in a kind of snake-like form, avoiding all obstacles with great facility, and forming line very quickly to front or flank.

A cavalry general should never be with his first line, but always where he can best direct his supports or organize a flank attack. The excitement is such, that it is a great temptation for a good horseman to lead cavalry in a charge.

Lord Uxbridge's gallant and chivalrous nature induced him to gallop into action at Waterloo on the left front of the first line of the Household Cavalry, so that by the gradual inward incline of the Union and Household Brigade he would be in about the centre of the line, but the result was, that being in the *mêlée*, he was unable to check the wild rush of the Greys and Inniskillings and some of the Life Guards and King's Dragoon Guards into the heart of the enemy's position, or to ensure the orders that he had previously most carefully and ably given for support, being effectually carried out.

Cavalry, being in general carried away by excitement, is never so easily beaten as after a successful charge; for practice, therefore, the actual charge, though as rapid as possible, should be very short, a small proportion only, being allowed to pursue, supported by the remainder, so as to accustom the men to being thoroughly in hand.

The gallop of manœuvre, and the pace, until breaking into the actual charge, should be fifteen miles an hour, being at the rate of a quarter of a mile a minute.

Great mobility is essential to "arms of opportunity."

In a country favourable to the use of that arm, cavalry must not be

much broken up into escorts, divisional cavalry, &c., or it will be beaten in detail; there is generally one portion of a field of action specially suited to its employment, and there it should be in full strength.

An offensive arm, whose sole defence is attack, cannot venture to remain in position, if inferior in numbers to those threatening it, unless, indeed, it is very superior in quality; and cavalry mixed too nearly with infantry, nine times out of ten, in the course of the day, hamper their manœuvres, or mask their fire, and can hardly tend to do more injury in the first instance to a routed foe than can be effected from the long range of the present sniders and armstrongs.

Formerly, the old musket being only effective at about 80 yards, it was an object to have a squadron or two immediately at hand, in order quickly to pursue cavalry recoiling from the fire of infantry squares; but such is no longer the case. Excepting in a peculiarly open country, cavalry piquets and videttes at night are a waste of horse power; they should at dark be withdrawn through a line already taken up by infantry, leaving only a certain number of mounted orderlies. During the day, the infantry required, should have rested, cooked their food, &c., on some part of the ground which they would occupy at night, so that the officers should, whilst it was light, have had an opportunity of thoroughly learning the country roads, fences, houses, outbuildings, &c.

A little before daylight, cavalry should again pass to the front, taking a more advanced line of posts, and send patrols to the front and flanks, each of which should be accompanied by an officer of military intelligence, to gain every possible information of the enemy. This system the Prussians advantageously practised in Bohemia.

The flanks of cavalry are so vulnerable, that of four squadrons attacking in line, one squadron should send a troop to be echelloned in rear of each flank, giving flank support independently of the second line.

All cavalry should have helmets sweeping down low behind, in order to protect the back of the neck, and also chains to defend the shoulders.

The employment of cavalry in large masses, under such men as Seidlitz and Zieten, was adopted by the great Frederick, and, after a considerable interval of change, re-adopted by Napoleon; and I believe it to be now more than ever necessary, that this "arm of opportunity" should have its divisions entirely under the control of general officers, who know its rôle, and how to apply it with decision, dash, and celerity.

In France there is a difference of opinion on this subject; but the French have not just now any cavalry generals of special merit or distinction; a strong proportion of cavalry is, however, there still advocated.

A great general of cavalry, the French, truly say, is as rare as a great "General-in-Chief;" he must possess a good and quick eye, a cool and determined courage, and great intrepidity, combined with prudence.

Good infantry prepared for attack, with their flanks well covered, should rarely, if ever, be charged by cavalry unsupported by artillery; but favoured by accidents of ground, cavalry should never lose an opportunity of surprise, and by riding at speed, in and over them,

should crush them with that powerful engine, the horse, rather than check the pace for the freer use of their secondary weapon, the sabre.

At Langensalza, the gallant Hanoverian Cavalry did not hesitate to charge the squares of the retreating Prussians, and finally, in a third attack, when a simultaneous charge was made on the other side by the Cambridge dragoons, on a battalion square commanded by a Colonel des Barres, two squadrons of cuirassiers succeeded in penetrating it, and in taking many prisoners.

With the long range and precision of modern guns, pursuit by cavalry, though it should be most energetic, must be conducted with greater prudence than formerly, if the retreat be covered by artillery.

There was no excuse for the French Cavalry not ascertaining the line of the Prussian retreat after Ligny; this ignorance ensured the unopposed concentration of the Allies and the uncalled for division of the French Army, and was one great cause of the ultimate loss of the campaign.

In affairs of cavalry, a general should endeavour to attack the the lighter by the heavier troops; the Prussians carried out this principle with great ability in 1866; though this was rendered comparatively easy by the Austrian so-called Cuirassiers ceasing to be cuirassed, their Lancers having been made light cavalry, and their Hussars being on the smallest cavalry horses in Europe, excepting the little active barbs, now ridden by most of the French light troops.

The squadrons in Prussia are permanently numbered, as are their regiments.

The Russian attack on the English Cavalry at Balaclava, if properly carried out, according to the Prussian system, would have been a good illustration of an engagement between troops of that arm supported by artillery.

Liprandi's object was to attack Balaclava, taking Kadikoi with the camp of the Turks and that of the 93rd Regiment (*vide Plate*). His first operations were necessarily directed against Kamara, and the redoubt on Canrobert's Hill, and those on the line of Causeway Height; these he succeeded in carrying, driving out the Turks, and taking nine iron 12-pounder ship guns. He had next to cross the plain called the South Valley, to attack Kadikoi, and the position occupied by the 93rd Highlanders, covering the gorge leading to Balaclava. But the Division of English Cavalry (about as strong as three good regiments) was in an admirable well-covered position, advancing from which it might at any time threaten his right flank during his movement across the plain, and would threaten his retreat, should he experience a reverse. His first object, then, was to draw this division from the position it was occupying into the plain, and subject it to a flank attack.

With this intent, four squadrons of Hussars were pushed by the opening between the Causeway Heights and Canrobert's Hill into the South Valley, and by manœuvring against Kadikoi, succeeded in drawing from its position one brigade of the English, which, while advancing in column of troops toward Balaclava, had just time to wheel into two

lines to its left, to avoid being taken in flank by a very superior force which suddenly appeared moving down upon it over the Causeway Heights. The four squadrons of Hussars should then have been in a position to have dashed forward against the English right flank.

When that portion of the Russian Cavalry moving over the Causeway Heights, brought its right shoulders up to attack the flank of the English Heavy Brigade, its support should have trotted straight on to check any attempt by the English Light Brigade to attack the flank of the Russian first line (column it was) which, from the position it occupied, it must have done with a broken front, and with a flank exposed to the fire of a Russian battery of Artillery established on the Fedukine Heights (this battery was afterwards captured by the French Chasseurs d'Afrique. The Light Cavalry not advancing, the Russian support joined in the attack on the Heavy Brigade.

The Prussians consider that a cavalry soldier's proper place is his saddle; and they have as yet done little to utilize their mounted troops as regards dismounted duties; but it should be remembered that the Snider carbines, and, still more, the Martini-Henry, has far greater range and penetration than the Prussian needle-gun, and is much more handy for skirmishing.

Properly trained cavalry should, when on foot, be more than a match for an equal number of infantry, as it can have mounted or dismounted supports as may best suit the occasion, and the men are not encumbered with knapsacks, &c.

Cavalry being thus more independent than formerly of the other arms, may with confidence (without taking into account ground, or other circumstances) threaten the flanks and rear of an army, capturing supplies and destroying railway communications, &c. For the latter purpose a few mounted sappers may be attached with advantage. Such cavalry could also rapidly reach and seize a position, and hold it until the arrival of advancing infantry, or might, on occasions, in extended order, seriously harass a battery which, owing to the configuration of the ground, it might not be able to attack mounted.

The retreat of the last squadrons of Lord Vivian's brigade was effectually protected by some men of the 10th Hussars, whom he had previously ordered to be dismounted and prepared with their carbines to defend the passage of the Genappe. They were placed on a rise on the opposite bank of the river, behind a fence, from which they could command the bridge and the cutting leading to it. The 18th Hussars and the remainder of the 10th supported the dismounted men and protected their horses.

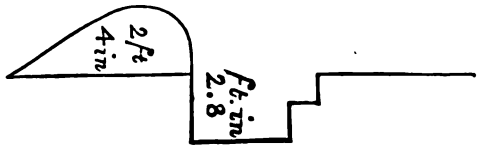
Shelter-Trenches.

During the manœuvres in Pomerania, the only occasion, on which "shelter-trenches" were used, was on the last day, by the northern Army, near Pansin, when, as I mentioned in an earlier part of my Lecture, a long high hill, the key of the position, was partially entrenched, obliging the southern Army to make, with part of its force, a very exposed flank movement. In the course of about an hour, as far as I could

ascertain, three two-gun redoubts had been thrown up, and four shelter trenches.

The Infantry were formed in line of quarter columns on the reverse slope of the hill, with about one-fourth of the usual intervals; the intervals were covered as usual with the customary number of skirmishers, which were therefore, in this case, shoulder to shoulder, and hidden and protected in short trenches dug about twenty yards below the crest, on the enemy's side of the hill.

SHELTER TRENCH, AS USED AT THIS MANŒUVRE.



The trenches were of such a depth, that men sitting on the reverse step were invisible from the front, and when standing in the ditch the earth thrown up in front was of just such an height as to enable the men to rest their rifles, slightly embedded, on it in their usual firing position, standing.

When the enemy attacked, the skirmishers commenced heavy independent firing, of course to the greatest advantage; and when he, with his columns, advanced well up to the hill, the defending columns having their front quite clear, moved quickly from the reverse slope to the crest of the hill, delivered a four-deep fire, and, charging, drove their opponents in confusion from the position.

I must, however, observe, that neither the French nor Prussian officers generally are favourable to the use of the spade, unless in exceptional cases. They say they do not wish to have their troops turned into armies of Sappers, but that officers must now pay more attention than ever to the accidents of ground for shelter; they consider that the frequent protection of trenches would prove most demoralizing, and that there would be difficulty in getting troops to leave them. There certainly always has been this difficulty as regards buildings that are occupied in the defence of villages, &c.; if they are carried, nearly every defender is in most cases taken prisoner, and thus large numbers are lost to the Army. The Austrian defence of Podok on the Iser, where the needle gun first proved its deadly powers, was a special instance of this; 500 prisoners were taken.

Great losses in prisoners also occurred in the villages on the Bistritz.

Infantry soldiers, however, have much spare time, and, in addition to trades, cannot be better employed than in practising the use of the spade.

The question of demoralization does not affect artillery, who should be carefully instructed how to throw up earthworks, just enough for

the protection of men and horses, where the conformation of ground will not give it.

Rifle volunteers, as being more suited to the defence than to the attack of positions, as the American war exemplified, should also be taught an organized system of spade-drill.

Shelter trenches can be made in most ground in from 20 to 25 minutes, sufficient to protect men from fire and view, and yet such that the men can pass over them in line with ease to attack the enemy on his close approach, having been up to that moment protected from his fire. Of every eight men, two should carry spades, two picks, with serviceable axe-backs to them, each weighing about 3 lbs., the other four men could carry cooking utensils, &c. I believe this subject is just now occupying the attention of the military authorities.

Field Telegraphs.

The main object of a field telegraph is to connect an army with the main lines of the country, and so with its capital, or base of operations; and it is in this way that it has been chiefly used by the French in Italy and Algeria, and by the Prussians in Bohemia; and a similar use of it was made by the corps manœuvring last autumn in Pomerania. More than ten miles of wire are rarely required; though I believe a Prussian Army in the field carries with it about 137 miles. Each division has 40 miles.

Each corps of the Prussian Army has with it, a complete telegraph-establishment, including materiel of all kinds, carriages, and a boat to lay the wires across the country, rivers, &c.

A person in plain clothes caught in the act of destroying telegraph wires in a campaign, is treated as a spy, and shot. It is said that the Austrians executed 100 men as spies, while the Prussians only employed six, none of whom were captured.

Practical Instruction of Officers.

Finally, the most important maxim I would draw from the autumn manœuvres of the Foreign Armies, is the positive necessity for officers of practical as well as theoretical knowledge. During European peace, this is only to be attained by superior Officers, by annual practice-campaigns, as in Prussia. The experience which English Officers obtain by wars in India, New Zealand, &c., do comparatively little towards a knowledge of such tactics as must be employed against an enemy thoroughly instructed in the science of war.

Candidates for the Army should be subjected to a practical, as well as to a scholastic test, and the practical and professional preparation could be given by attaching them, probationary, as Cadets to regiments, to be reported on monthly by Commanding Officers.

I have shown in a little pamphlet (lately published by Mitchell & Co. see Appendix) with what facility the last proposal could be carried out, without expense either to the candidate or to the public.

The officers in Prussia are, I may say, elected by their own body; as a commission can only be given by the sanction of the "Corps d'Officiers," they are therefore invariably gentlemen of good reputation socially, and as regards their military acquirements, pull admirably together, are well educated, and are the best practical officers in Europe.

In England, as an economical mode of promoting retirements, a man who never was a soldier may become a lieutenant-colonel, as a colonel when he ceases to be a "soldier," becomes a "general." Relative rank is also at times inconsiderately granted, and thus, when the high grades in our army are so prostituted, and no acknowledged Court precedence given to officers of the Land or Sea Forces, it can hardly surprise one that military rank is much less appreciated than formerly, and that officers take little pride in their profession or their uniform; this in a service adopted in England for honour and glory, and almost without pay, must in the end produce evil results.

Old soldiers are much better cared for in Prussia than in England, all sorts of government appointments being filled by them. The King sets the bright example of having none but deserving and decorated old soldiers about his person as servants; hence the army is made a proud and desirable employment for good men, and is more looked up to in a social point of view, than with us.

I cannot conclude this lecture without expressing the deep gratitude that we English Officers felt for the kindness and liberal,—I should say truly regal hospitality—we received from the Royal Family of Prussia, for the cordial good fellowship accorded us by the Officers of the Prussian Army, and for the ample opportunity given us of obtaining military information from the manœuvres of the most highly instructed troops in the world.

To Baron Korff, to whose care we were specially entrusted, we were likewise greatly indebted, and we shall not readily forget it. Nor can I leave unmentioned the name of our military attaché, Colonel Walker; his information relating to all we were anxious to understand was as valuable, as it was always most kindly and readily tendered.

APPENDIX.

Suggestions for the Practical Professional Education of Candidates for the Army, after passing the Scholastic Examinations, at little expense to themselves and at no cost to the Public.

THERE is at present a long list of candidates for the Army, who, owing to recent reductions, will have to wait more than a year before they obtain commissions.

Many of these young men are now idling about London, Brighton, Bath, Cheltenham, &c., at considerable expense to themselves, or to

their relatives, while they would be much better occupied in acquiring the minor details of the profession they hope ultimately to adopt.

This would be effected by their being attached, on probation, as unpaid Cadets, to home regiments of Cavalry and Infantry.

Marks should be allowed for great practical proficiency, according to Commanding Officers' reports; such marks to be added to those obtained at the theoretical examination, and the Cadets to be gazetted to commissions according to the total number of marks obtained.

The scholastic would thus become the preliminary test, and the professional (or practical) the final test of qualification for the Army.

A Cadet when learning the early details of the profession, would be zealously working for the prize, "a commission."

Zeal, the quality in which we now are most deficient, would be a necessary condition of success; and a knowledge of preliminary drills and the routine of regimental duty, would be acquired much more quickly by Cadets who had an object to gain, than by those who had been already gazetted.

By the proposed scheme, the country would have a reserve of young Officers more or less formed, from which to augment the subalterns of any regiments suddenly ordered on field service, and would no longer be called upon to issue pay to a proportion of cornets and ensigns as yet unfit to be entrusted with any sort of duty. Regiments, moreover, would be rendered much more efficient than at present, as they would be protected from having young Officers appointed, who may be totally unfit for the particular branch of the service in which they have selected to serve.

In the Cavalry, in particular, there is no regiment in which there are not some Officers of whom, within the first fortnight of their joining, the Colonel and Adjutant could not safely predict that they would never make efficient Cavalry Officers. Some of these, it is early evident, can never be made even moderately good horsemen; they have no nerve, take no interest in the management and care of horses, and never ride if they can help it. Some are deficient in sight, some in hearing, some have an impediment of speech, or little or no voice; some are unable to endure any fatigue or exposure, and are given entirely to sedentary occupations; others are so weak as even to be unable to learn the sword or lance exercise, fencing, or single stick. Yet, when once these young men have got their commissions, regiments may be encumbered with them for years. However socially agreeable many of them may be, they are useless as Officers, and a bad example as regards duty. Some of them, from joining too late in life, are positively not only useless, but also unamenable to discipline; but even these cannot be got rid of, unless they commit themselves so seriously as to be liable to trial by court-martial, which at once causes a military scandal.

The Cadet system would not only prevent any young officers who are practically inefficient, being appointed to regiments, but would save young men from the very great expense of embarking in the Army without a trial, and fairly ascertaining whether it will be likely to suit them.

Cadets for Cavalry.

1. Those candidates for the Army who, having passed the theoretical examination, have selected Cavalry, should be appointed probationary as Cadets to cavalry regiments quartered in the United Kingdom.

2. Each of these regiments might have a Cadet appointed for every cornetcy that becomes vacant, until the last-ordered reduction is carried out.

Thus, a regiment in which only one supernumerary cornetcy has been absorbed would only have one Cadet, whereas a regiment in which all four supernumerary cornetcies have been absorbed, would have four Cadets, or less, at the discretion of the military authorities, and according to the number of candidates on the list.

3. Cadets should be probationary, and under instruction for about twelve months.

They would be given to understand that they are probationary, and may hope to obtain cornetcies earlier or later according to their merits, as reported on by the Colonels of regiments to which they are attached: or may be rejected as unfit for the particular branch of the service which they have selected, and be sent as probationary Cadets to another; or may be rejected altogether as unfit for the Army.

4. Cadets to be drilled as Cornets now are; to attend stable duties, courts-martial, &c.; to be thoroughly instructed in patrol, escort, and out-post duty, musketry, fencing, broad-sword, lance exercise, and in fact in everything that will try their physical powers.

5. Cadets to have a perfectly plain, inexpensive shell jacket, forage cap, a plain patrol coat (to be worn either alone or over the jacket, according to weather), strong blue cloth trousers, steel spurs, black leather sword belt, white leather sword knot, and cavalry sword.

This uniform never to be worn out of barracks, except on duty.

6. Cadets to have a troop horse to ride only on duty, and never but in the soldier's saddle and horse appointments; to have a bâtman who will look after the troop horse and appointments (which are to be kept in a troop stable), and will wait on the Cadet, clean his clothes, belts, &c., for which he is to be paid 2*s.* 6*d.* a week. With a view to strict economy, no Cadet is to be allowed to keep a horse of his own.

7. A few sealed questions, to be answered in writing, without assistance, in the presence of the Commanding Officer, to be sent from the Council of Military Education to Cadets, monthly or quarterly, on Court-martial duty, Articles of War, Queen's Regulations, and War-office Regulations.

8. Marks should be allowed for great practical proficiency, to be added to those obtained at the theoretical examination; and Cadets should, in ordinary cases, be gazetted according to the total number of marks obtained in the scholastic or preliminary examination, and the practical and final test.

9. Officers commanding regiments who have vacant cornetcies, might apply for the appointment of any Cadets of whom they have received a very high report, with a probability of their appointment, without reference to their position on the list of candidates; the Cadet's

character from the Commanding Officer being sent to the Military Secretary with the application. This would be a great encouragement to Cadets to be well conducted, and to learn their work, as Lieut.-Colonels commanding regiments would, for their own sakes, select the best young officers they could find. This plan is somewhat after the Prussian system of selection from the one year Cadets in the ranks.

10. Lieutenant-Colonels should be held strictly responsible in case, when a cornet joins a regiment, his conduct and practical acquirements are reported not to be equal to their representations in every particular.

11. Commanding Officers of regiments should have the power of placing a Cadet under arrest, but must report the circumstances at once to the Adjutant-General, Horse Guards.

12. The Cadets should be required to live regularly at the mess as honorary members, but only be allowed to pay for the breakfast, lunch, and dinner, of which they partake; they should be forbidden to contribute to mess donations, subscriptions, or extras of any kind; and should not be charged for any public or private guests. The Commanding Officer would be held responsible for these rules being strictly observed. The Cadets to wear the plain shell jacket and blue trousers at dinner.

13. If there be vacant Officers' quarters in the barracks, it would be desirable for the Commanding Officer to apply for leave for his Cadets to occupy them, subject to the usual damages, but the public must not be charged with coals or candles.

In case of there being no spare quarters, Cadets must procure lodgings (which Commanding Officers will take care are in the immediate neighbourhood of the barracks) at their own expense.

14. Colonels commanding cavalry regiments to report on their Cadets monthly, stating in each case whether the Cadet is gentlemanlike in his conduct, good tempered, amenable to discipline, likely to make a good horseman, fond of and anxious to understand the management of horses; whether he has good nerve, quick sight, a good eye to country, and a sufficient knowledge of military drawing to be able to make a simple, rough eye sketch from horseback, and is healthy, active, energetic, and equal to the fatigues of a campaign.

All reports, special or monthly, on Cadets, to be made direct to the Adjutant-General, Horse Guards.

15. Guards and sentries not to pay compliments to Cadets; but Non-Commissioned Officers and soldiers to salute them, and to be liable to punishment for any disrespect.

16. No leave of absence to be given to Cadets excepting to stay with relations; other leave leads to extravagance.

Cadets for Infantry.

The regulations proposed for cavalry Cadets would apply equally to those attached to infantry regiments, excepting as regards horses, riding, and uniform, which latter should be the same as that worn by Sandhurst Cadets.

Infantry Cadets should be encouraged to apply to be for a short time attached to cavalry, as equitation is best acquired in early youth, and it is most desirable that mounted officers in every branch of the Service, should be fair horsemen.

Army in General.

It is notorious that there have been many Officers of high military educational acquirements, who have been, from first to last, very indifferent Officers in the field.

If the Lieut.-Colonels commanding regiments were questioned, there is not one in ten that would not agree in the advisability of a practical as well as a strict theoretical test for candidates for commissions.

Officers would virtually join the Army at an earlier age than they do now:—a great advantage, if only because discipline is a habit only to be acquired in youth.

The most efficient Brigade-Majors and Aides-de-Camp, as was amply proved in the Crimea, may be chosen from amongst the best of the regimental Officers; for higher commands, general Officers should be selected from those who have previously commanded regiments and brigades.

England ought to have the ~~most efficient~~ least Cavalry and Infantry Officers in the world.

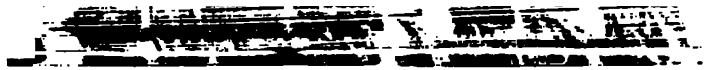
The manly games, knowledge of character, readiness of resource, social pride, and love of truthfulness and honour, inculcated and practiced at Winchester, Eton, Harrow, and our other great public schools; added to the love of enterprise, good nerve, and quick eye to country acquired by our national field sports—for ground means tactics; form an admirable preparation for the final practical test proposed.

As things are, we get our best Officers chiefly from a class who, being in a pecuniary sense independent, remain in the Army only from pure zeal, and love for the profession; but few of whom, unfortunately, like Indian or colonial service, though they would willingly and cheerfully endure all the hardships of the most severe and lasting campaign.

It is better for the State that Officers of the Army should not be mere military adventurers, but should, at all events by connection, be interested in order, and the security of property; and their being of a class far superior to the soldier in social position, ensures them respect, and renders command comparatively easy and effective.

Practical professional education for the higher ranks of the Army, can only be attained by the Prussian system of regular peace campaigns.

HARRISON AND SONS, PRINTERS IN ORDINARY TO HER MAJESTY, ST. MARTIN'S LANE.



EXTRACTS

FROM

THE PRUSSIAN ORDERS

FOR CONDUCTING

LARGE MANŒUVRES.

TRANSLATED BY

CAPTAIN MILLIGAN,

39th Regiment.

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ALDERSHOT,
11*th April*, 1870.

THE practice of Sham Fights having been recently introduced into our Garrisons and Camps of Instruction, with the good result of exciting the interest of both officers and men in the duties of their profession, I have been induced to attempt the translation of some of the Orders on the subject that have been issued to the Prussian Army.

I had the good fortune to be present at the manœuvres of the II. Army Corps of the North German Confederation in the autumn of '69, when, in addition to the pleasures of the visit, enhanced by the munificent hospitality of H.M. the King of Prussia, and the extreme kindness and courtesy of all with whom we came in contact, one could not fail to be struck with the instructive character of the Exercises; and it is in the hopes of being able to further the continuance of a system which has been so successfully introduced into our Service, that I have ventured to submit this imperfect version of the German, for the benefit of my companions-in-arms who are similarly interested.

C. MILLIGAN, *Capt.* 39*th Regt.*,
A.D.C.

PRINCIPLE OF CONDUCTING MANŒUVRES.

General Outline of the object of Army Exercises, with the arrangements and method of conducting them.

The object of all army exercises is to train the commanders of all ranks, as well as the men under them, to perform the duties which may be required of them in war, to teach the latter to use their arms skilfully, and to move with silence and regularity; it is also a means of ascertaining the degree of proficiency which the divisions of the army have attained.

Army exercises may be of two kinds:—

I. Such as are included in pure tactics, by means of which the troops are trained in the use of their arms and are accustomed to perform evolutions quickly and methodically (Drills).

II. Exercises depending entirely on the nature of the ground and designed in accordance with a general idea adopted as a basis (Manœuvres) thus:—

(*a*) Without dividing the division or corps, which may be manœuvred intact against a skeleton enemy commanded by an officer appointed for that purpose;

(*b*) Or by dividing the corps into two parties under two commanders appointed to act against each other on some general plan (Field Manœuvres).

The orders for purely tactical exercises are laid down in the drill exercises for the different arms: they must be conducted carefully and strictly, according to the regulations. It is essential that the officer conducting them should act with decision and assurance, founded on a thorough knowledge of his work.

In order to fulfil every object in view in performing these exercises, the largest tactical body must, as a natural condition, be limited to the brigade. When the different branches of the service are practised in manœuvring against a common object, in order to make such exercises really useful, their movements must be influenced by the contour of the ground, which should consequently offer natural difficulties.

The chief aim of all manœuvres detailed in paragraph II. is to teach commanders and soldiers to avail themselves of the advantages of ground and to practice with intelligence the requirements of actual service. By means of a clearly defined plan (the general idea), the situation of the troops affords an opportunity to the commander of the whole, as well as to the commanders of the individual portions of the force, of displaying and improving their military ideas, of exercising the talent of coming to a rapid determination, and of acquiring a readiness in handling troops, due regard being had to the nature of the ground and to the emergencies of the moment.

The movements must not be arranged beforehand, nor should the relative positions be specified. All must be left to the guidance of the commander, who is himself simply furnished with the "general idea," and who must not be shackled by a preconcerted conclusion to the operations. It must therefore be understood that the principle of these exercises is to make the situation at the end of the manœuvres the sole test of the value of the dispositions

which have been effected. Any preparation for the actual field day in the shape of a rehearsal would be quite antagonistic to this view.

All manœuvres will be useful and instructive in so far as they place troops in such positions as might be expected to occur on service, and accustom them to overcome the difficulties they may then meet with. In time of war a division may be on the march without knowing when and where it is likely to encounter the enemy. The unexpected intelligence of his appearance might make it necessary for the moving column quickly to take up a tactical position. The army may have been marching in several columns, and this would render it more difficult to take up a position when the enemy comes in sight.

It is essential that movements similar to these should be practised, and that the troops on the march should be suddenly informed by the officer superintending-in-chief of the presence of an enemy, or he might arrange that some troops representing the enemy should appear suddenly. Upon which, the column should break up the line of march, and, in spite of all difficulties, form up without confusion.

All movements should be conducted as quietly and as deliberately as possible, so as to enable the superintending officer to point out on the spot any faults that may occur, and to impart the necessary instruction suggested by the occasion.

It is very necessary that the interior order of the troops should never be lost in the performance of any manœuvre. When the great exactitude in halting and moving, which is required on parade, cannot be retained, yet order must always be preserved, as, without it, it is out of the question to employ troops efficiently. The "telling off" must not be neglected, as otherwise the power of designating any

portion of the troops, the section of a company for instance, by simple word of command, would be lost.

The exercises mentioned in Part II. consist of manœuvres in two divisions (field manœuvres). In this case, the two sides are drawn up against each other in different positions in conformity with a pre-concerted plan (general idea). Each commander should sketch out the dispositions for his own side, according to what he conceives will be best adapted to the object he has in view.

The chief desideratum of these manœuvres is, that they should call forth the talent of quickly and correctly apprehending the import of similar situations in war and of acting according to the inferences deduced.

The "general idea" should indicate clearly and comprehensively the position of the two divisions, without entering into details; these should be left to the free judgment of the two commanders. To fetter their dispositions would be directly opposed to the spirit of these exercises. The general idea may indicate the strategical position of the opposing forces for several days, but the nature of the ground and other circumstances may necessitate the substitution of a different supposition for the remaining portion of the exercises. Still each of the two commanders should be made acquainted with so much of the general idea only, as is required to mark the strategical points of the division under his command, and the information need only be of such a nature as he would be likely to ascertain in war with the means at his disposal. The situation of affairs beyond the immediate pale of the tactical operations may also be altered by imagining the sudden receipt of fresh intelligence. This will illustrate the necessity of rapidly adopting modified dispositions.

Each commander regulates in a general way by his arrangements the position and movements of his troops;

each determines to what extent his side shall respectively unmask itself, and fixes on the end he has in view, and on the best method of conducting the fight so as to attain it, taking care that all orders connected with the arrangements are quite clear and intelligible. They must be expressed in as few words as possible, such as can be conveyed verbally need not be written, as is the case in war. Each leader of a *sub*-division should act in the spirit of the orders he may receive, within his allotted limits, according to his own judgment of the locality, the position and movements of the enemy, and, in short, of all circumstances which may combine advantageously or prejudicially for the solution of his task. The object of these exercises is attained when the leaders of both sides are enabled to display their judgment and aptitude in taking up positions, and their rapidity in coming to a right conclusion. But the instruction would be incomplete if an opportunity were not afforded to the leaders of the *sub*-divisions (brigades, battalions, squadrons and batteries) when they may happen to be isolated, of exercising a discretionary power within prescribed limits, neither should they be obliged to adhere *too* closely to the general scheme.

Should the plan of operations fail to stimulate the inferior ranks to activity, the ill-success may be traced to the fact of the general idea being ill-adapted to the purpose in view.

If the task allotted to each side respectively is capable of being carried out, and at the same time the principles which the manœuvre was designed to illustrate are not lost sight of, the preconcerted plan will call forth the ability and skill of the leaders of all arms and ranks.

When, as is indispensable, a division is already divided into advanced guard, main body, and reserve, several commanders have an opportunity afforded them of using their

judgment in exercising independent action in furtherance of a common object.

Again, when the scheme involves sending out detached parties, there is then greater scope for the same independent action on the part of individuals. When the movements of the opposing sides are undertaken under such circumstances, that the position of one is completely unmasked to the other, and that consequently the ultimate object is only to be attained by hard fighting, an excellent opportunity for instruction is lost.

The pure tactical practice of a sham fight is quite a secondary consideration in these manœuvres. Even turning the ground to good account, and the consequent application of the principles of tactics, is not the main point. The main point consists in making a thorough and practical appliance of the available forces towards the attainment of a specific object. This must include marches and movements beyond the immediate vicinity of the enemy—in short, all measures that can be brought into play, the merits and demerits of which will be finally decided by the manner in which each side comes into action.

The general idea must therefore allow of complete latitude in so essential a particular as manœuvring in two divisions. The respective positions of the hostile forces, and the points from which they are to debouch, must be so indicated as to fulfil the objects in view. Both sides must be left to their own resources in obtaining information concerning the positions of the enemy of which they are ignorant, by means which would be available in war. The distance between the opponents must be sufficient to admit of sending out detachments to ascertain the strength and position of the enemy. The interest will be increased when the ground to be reconnoitred is of a varied nature, affording an opportunity of utilizing all arms. Greater

vigilance on the part of the outposts, picquets, supports, &c., is then required. They must carefully observe the nature of the country, and thus turn their duty to an instructive purpose.

The plan of the general idea may require one party to act on the defensive, to await the attack of the enemy and to compel him to sacrifice a portion of his force owing to the difficulties of ground; thus weakened, the latter may be forced to carry on the war with his reserve. Selection of site, and skill in turning the ground to account, especially with reference to the reserve, are the chief points to be considered. The defending division is in this case ordered to assume the aggressive. The assailants' problem here consists in discovering the weak parts in his adversary's position, in properly distributing his troops, both as regards their number and description, and in the correct formation and position of the reserve.

The general idea may direct both sides to advance to the attack. They will then meet each other on more equal terms. A rapid survey of the enemy's situation, comprising all the details and conditions of site, strength and position, will be a sure guide to proper action.

Let it be supposed that, according to orders, the manœuvring divisions approach each other. The incidents which now result therefrom will be instructive, and will answer their purpose in proportion as they represent an actual battle, where every circumstance would find a parallel reality. The proper appreciation of certain parts of the ground, and the influence which their possession by either side would have on the result of a battle, provided they understood how to turn them to the best account, is particularly applicable to a case of this sort.

To render these exercises instructive, no attempt should be made to attain an object which would be im-

practicable in war under similar circumstances. For example, an attack in column must never be made at a field day when in actual war it would be impossible, and could only be effectual as the result of a superiority of fire.

In order that the commanders of the sub-divisions and of the different arms may have an opportunity of displaying their talent of judging the country, their aptitude at forming a resolution, and the military knowledge they may possess, the movements of the entire force must not be too quick or too continuously progressing. Each commander will then be able to cast more than a passing glance at the position he may be occupying for the moment, and will perform his part in the proceedings to the best of his knowledge. If the steps the enemy may have taken for checking the advance and throwing obstacles in the way are entirely disregarded, a great and equally unnatural speed will be the result. Indeed, it would appear to be only reasonable that moral influence should be taken into account, but in peace manœuvres it is impossible to lay down any such rule. It also happens that frequent attempts at flank movements disturb quiet and order to a greater extent than would really occur on service. In a flank movement—that is to say, the threatening an enemy's flank or line of retreat—it cannot be considered an absolute advantage to the side so acting, or a corresponding disadvantage to the side so threatened. Everything depends upon the way the two parties come into action at the conclusion of the operations. The side whose flank is threatened, but which has its force in hand and its resources disposable, can often place the opponents who outflank him, whose fire is divided and who perhaps are too widely extended, in a critical situation.

As in actual warfare, an engagement consists of a series

of incidents separated in point of time and place; just so is it the case at a field day, provided that the ground selected answers the purpose, and that the divisions are handled and the manœuvres are carried out in detail in accordance with the original scheme, irrespective of whether such be judicious or not. Provided, too, that the interior order which is required of the troops on the ordinary drill ground is never lost, or if, through obstacles of the ground, it is necessarily disturbed, that it be promptly restored. Provided that the prescribed brigade movements are not further departed from than the nature of the ground or other potent reasons on service might for the time being necessitate. Provided lastly, that all manœuvres are on the whole performed with reasonable rapidity, that the arms are handled according to order, and that the infantry advance to the attack, the cavalry charge, and the artillery serve their guns as laid down in the regulations. It is by satisfying these conditions, and the due observance of the working of the different arms, that the manœuvres in two divisions fulfil their most useful purpose. The disregard of these considerations often leads to the most anomalous positions, and allows the necessary telling off on parade (*appell*), which is the condition of all order, to lose its effect.

By conducting the proceedings in a quiet and orderly manner, the commanders of the *sub*-divisions of the force and of the different arms also have opportunity and space to act here and there independently, and, guided by a rapid and critical glance, instantly to take advantage of any opportunity which the enemy may afford, and thus increase the utility of the division entrusted to them and further the general project.

All interest in these exercises will necessarily diminish in proportion as the opportunity of exercising such an

animating activity is wanting, whereas it will increase and remain alive, even in the lower ranks, when such stimulant exists.

Special Instructions for conducting Manœuvres.

(A.) *Divisional and Corps Manœuvres with a Skeleton Enemy.*

These manœuvres are intended to practise the superior commanders in moving large bodies of troops with regularity, with the view of attaining some military object, and in acting with a thorough appreciation of the nature of the ground. Consequently they must not degenerate into mere drills.

In these manœuvres, therefore, it is merely necessary to acquaint the troops with the general idea and the rendezvous. The commander is allowed to determine beforehand what relative positions the manœuvres shall assume, but he must not impart any intended dispositions or instructions to the troops on the subject; he should conduct the whole undertaking by word of command and by orders conveyed verbally by aides-de-camp.

The enemy should be represented by a small force of all arms drawn up in order of battle.

Field Manœuvres.

1. *Arrangement of the Manœuvre.*

The officer superintending-in-chief plans the whole.

The general idea indicates generally the seat of war in which two sides operating against each other are supposed to act, and applies therefore equally to both sides; further,

The special idea defines the particular conditions which mainly influence each of the two parties, and at the same time points out the successive objects to be attained.

Imaginary troops within the area of the field of battle are objectionable, as are likewise battalions, and squadrons represented by flags. A manœuvre, however, gains in interest and utility when the numerical proportion between the opposing divisions is altered during the operations. If this is effected by means of imaginary or flag battalions, they must not be supposed to take their place on the actual field of battle; their existence can be recognised outside it only. Their whereabouts and the time of their approach must be notified to the enemy, because, did they actually exist, their presence would be indicated by means of patrols.

Imaginary ground.—It is not desirable to assume a fictitious idea of the ground; it should be regarded as it actually exists.

Promulgation of the special idea.—The special idea can be issued for one day only, as from the military situation of affairs at the close of the day, the new state of affairs can only be for the first time quite settled by the commander who superintends the operations.

The special idea for all subsequent manœuvres can, however, be prepared in its general outline; but it must only be definitively arranged and given out the day immediately preceding the one on which it is to be put into execution.

Dispositions of the commander.—Starting on the basis of the general and special ideas, the commanders of the opposing forces sketch out for themselves their dispositions and deliver them to the officer superintending-in-chief. The latter should only exercise his power of altering these dispositions in so far as they may be opposed to the special idea.

They must always contain their rendezvous, the spot where the commander awaits his reports, the direction of a possible retreat, and the order of battle.

2. *Influence of Officer Superintending-in-chief on the course of the Manœuvres.*

The officer who superintends leaves the freest course open for carrying the dispositions into effect. He encroaches but rarely on the special idea. For instance, when he wishes to change the battle-field of both leaders, or when, owing to the progress of the fight or the decision of the umpire, the case becomes so altered that another turn must as a natural consequence be given to the manœuvre.

3. *Criticism on the spot.*

It is the duty of the officer superintending-in-chief to deliver a "critique" upon the manœuvre. He follows its progress therefore as carefully as possible, and notes the strategical positions in order to form an opinion upon the commanders as well as upon the discipline and instruction of the troops. For that purpose he may avail himself of the observations of the umpires, which the latter should be ready to impart when required. This criticism will, as a general rule, be given at the end of a field-day.

In the event of any extensive complication of manœuvres arising, which would be improbable in war, it is desirable to suspend operations for a time. Then, by comparing the conditions of either side with the parallel circumstances of war, the consequences which would ensue may be pointed out, and the order, which may have been somewhat lost, can be restored.

With this object, when the signal, "the whole, halt," is sounded by all the trumpeters and buglers, firing ceases immediately, all troops halt on the ground they may happen to occupy at the moment, the infantry pile arms,

the artillery and cavalry dismount; the skirmishers, however, remain out.

On the officer's call being sounded (not before), the commanders of independent bodies, including those of battalions and detachments, as well as of detached squadrons and batteries, together with the adjutants, at once repair to the superintending officer, to the spot from whence the signal proceeded. When the "advance" is sounded, the movements may be continued.

4. *Conclusion of the Field-day.*

Should either of the commanders be of opinion that in the course of the day he has fulfilled his allotted task, or should he arrive at the conclusion that it was not possible to accomplish the object proposed to him, he mentions the fact to the officer superintending-in-chief, stating at the same time where he proposes to establish his line of outposts and his bivouac. As soon as he has obtained the necessary permission, he gives orders for the engagement to be brought to conclusion in a service-like manner, and for the line of retrenchments which are to be held by outposts to be taken up.

Behind these latter the troops can, when necessary, take a short rest. It is the duty of the officer superintending-in-chief to put an end to the manœuvres whenever he judges it expedient, and to regulate the positions of the outposts of the hostile parties.

The method of pitching an encampment and establishing outposts after an engagement as if on actual service, forms a most important part of the exercises. This duty must not be neglected, though the fight may have a conventional termination.

5. Conclusion of the Manœuvres.

The termination of the manœuvres on the last day is notified by the signal—"The whole assemble and roll call."

6. Critique at the end of the Field-day.

The signal, "Officers' call" summons all the commanders to the officer superintending-in-chief. To obviate delay in the movement of the troops to their encamping ground and in taking up a line of outposts, the officers told off for outpost duty remain away from the critique, as well as a superior officer who has been previously appointed to conduct the march of the rest of the force; the senior captains taking command of their respective regiments and battalions. The superior officers must then communicate to their subordinates in the bivouac any remarks that may have been made at the critique which it is desirable they should know.

Conventional Rules necessary for Field Manœuvres.

(a.) *On forming decisions as to the result of engagements.*

In peace manœuvres, the bravery of the troops and the skilful manner in which they handle their arms cannot, as in real war, have any influence upon the issue of the battle; the intelligence of the officers concerned must, therefore, be exercised in forming a correct judgment of the situation of affairs, and they must of their own accord determine upon the probable result of a defence or an attack. It cannot but happen occasionally that the views of the parties concerned do not agree in this matter, in which case, as also in that of where at a peace manœuvre, on account of circumstances, it is a question of shortening the course of an engagement which in real war would take several hours, it becomes necessary to obtain a decision.

It is the business of the umpire to impart these decisions in each individual case, without hampering the subsequent dispositions, for which a free course should be left open to the commander.

The umpire is only concerned with what takes place on the scene of action, irrespective of the turn the battle may take, or whether the general idea has been conformed to or not; he has to decide—

(*a*) Whether any body of troops has to retire;

(*b*) Whether they must consider themselves prisoners, or

(*c*) As cut off;

(*d*) Whether they must be put out of the fight; and if so, for how long.

Those comprised in (*b*) and (*c*) march immediately to the rear, and take no further part in the day's operations. Those in (*d*) retire behind the fighting line, and there wait until they have completed their term of banishment. The officer superintending-in-chief and the leaders of the opposing forces must be at once made acquainted with these decisions, to enable them to take measures accordingly. Except in the case when H.M. the King appoints special umpires, the officer superintending-in-chief fulfils the post of umpire; and as it is impossible for him to be present everywhere on an extended scene of action, he is at liberty to appoint one or more superior officers, who must be notified to the troops, to act as umpires when a decision is required.

(b.) *The handling and individual tactics of the different arms must be carefully attended to, due regard being had to the nature of the ground.*

1. Vollies must not be exchanged by troops at a closer intervening distance than 250 paces. Skirmishers in the open must not fire when within 200 paces of each other.

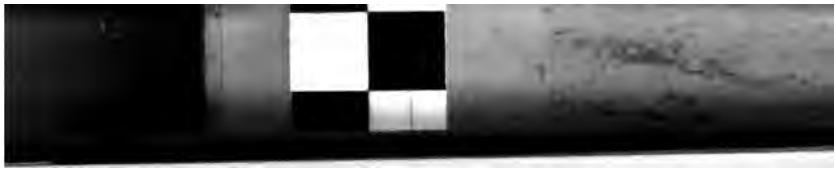
Cavalry charges and bayonet attacks must be halted when within 60 paces of the enemy; but up to that point they must be led on with the energy that is laid down in orders, otherwise they will not be considered effective attacks.

2. Cavalry and artillery must not remain halted within effective shot of infantry. Infantry and cavalry are not to attempt a formation when within effective range of canister or grape. Skirmishers and artillery must not move without cover across a plain which is commanded by the enemy's cavalry, and so on.

3. Guns limbered up, which have not yet commenced firing, or which have ceased doing so, may be captured by cavalry or skirmishers, if unsupported or only weakly protected.

4. Let us suppose the existence of a strong position, of a defile for instance, which it is found necessary at any cost to force with a superior body. Supposing too that suitable preparations have been made for its defence, it could not in actual war be captured at the first assault, and therefore, at a manœuvre, the defenders must first be shaken by a superior fire before an attack with the bayonet can be deemed successful. These measures would generally require to be repeated, and after each attack has been repulsed, the assaulting party must retire to reform as far as would be necessary in an actual combat, and a new attack must be commenced with a fresh relief. Such renewed assault must be properly preceded by an increased fire from both artillery and infantry, and then followed by a bayonet attack, with an augmented force. If fresh troops are at hand, it may be desirable to lead them on to the attack, allowing only short intervals between the repeated onsets.

5. In peace manœuvres, it is very difficult to represent a cavalry attack which is to be considered indisputably successful. For, cavalry that have been thoroughly routed



would not in point of fact re-appear on the field for some time, probably not again the same day. Infantry and artillery that have been discomfited by cavalry would, as a general rule, be placed *hors de combat.*

It is part of the umpire's business to fix a limit to the results of a victory. The victor should improve on the success he has been declared entitled to, by a proper appreciation of the battle-field. In real war opportunities are generally to be found for masterly decisions and brilliant feats of arms. In anticipation of this, therefore, the umpires must exercise great care. The cavalry of both sides must not be allowed to hug each other so closely as has hitherto been their habit, and the frequently-repeated attacks in line at short distances from each other must be discontinued. The beaten cavalry must always retire at a trot, and should the victors desire to follow them, they may do so at a walk at an interval of 500 paces.

6. A battalion in square, apparently unshaken, cannot be attacked by squadrons detached singly. Three or four squadrons might undertake the duty, attacking in succession, when the battalion is so situated as to be assailable from different sides.

(c) *Regulations for preventing Accidents, Disorder, and Damage to Property.*

7. The danger to be apprehended from the blank ammunition, necessitates a minimum interval of sixty paces between the combatants, within which limits all troops must halt. If by accident they approach nearer, the officers must immediately "halt," "order arms," or "return swords." The umpires decide which party must retire, and the pursuit must be conducted by the victors at the proper distance.

8. Firing in the vicinity of buildings, hayricks, &c., being forbidden, the defence of villages must be marked

by skirmishers posted behind the outlying hedges and by reserves hastening to attack with the bayonet. The detachments which in real warfare would occupy houses, barns, churches, &c., are simply drawn up outside, and their officers teach them what they would be required to do on service.

9. The destruction of bridges must only be imaginary, and the umpires must decide on the length of time necessary for their repair.

10. Cornfields, enclosed meadows and pleasure-grounds, must not be entered. Railways are to be passed at the crossings only, and then with every precaution. The above, however, are to be considered tactical obstructions only when they actually form natural obstacles, and not when they are simply impassable on account of police regulations or similar reasons; for example, meadows, by reason of their swampy nature, plantations which are impenetrable, and railways with embankments or cuttings. A body of troops passing over a railway at a level crossing must not be looked upon as if threading a defile and consequently exposed to attack. For on service they would march straight across it in line, and therefore in an exercise manœuvre it is not allowable for the enemy to take the smallest advantage of this special formation or of the delay thereby entailed.

All damage done during the exercises is to be accounted for by the officer who was in command or who exercised a supervision, unless a higher authority release him from this responsibility.

Dress of Spectators.

Officers attending the manœuvres as spectators are not to wear their sashes. The umpires wear sashes and a white band round the left arm, above the elbow.

Conduct of the Opposing Sides.

Previous to engaging with the Enemy.

In manœuvring, care must be taken to adhere to the strategical base, which should be abandoned only by compulsion, never voluntarily.

That the opponents should merely come into contact with and engage each other, does not comprise all that is required; their method of doing so, the precise moment and the locality selected, are very important points. Strategical reasons may justify postponing an engagement or avoiding it altogether, even though a favourable result would hardly be doubtful, for a victory costs time, and in war time is sometimes more precious than a victory.

Under the above conditions, due scope is given for manœuvring, and an opportunity is afforded for correctly applying the principles of command, as well as of representing a true picture of war. The original suppositions, therefore, must be kept up during the manœuvres, and the relative strategical position of the opponents must be carefully taken into account.

This is sometimes difficult, because one may have to calculate on an unknown and ever-varying force. Unknown, because the enemy's intentions can only be guessed at, and not ascertained; variable, because when a fresh step is taken by either side, the state of affairs becomes altered, both in point of time and place. Still these difficulties, which arise out of the very nature of the business, are of service in making the exercises useful and of a more scientific description.

To begin with: when the intelligence from the enemy is scanty, the position in which we stand is less clear; dispositions must then be confined to the immediate operations of the moment, to avoid misunderstandings and the spread of contradictory orders from head-quarters.

At this stage of the operations the leading rules are—the maintenance of an efficient advanced and rear-guard; a thorough knowledge of the country; a compact order of march, but one admitting of a rapid deployment and an easy advance to the front of cavalry and artillery.

On the arrival of more definite news from the enemy, the dispositions should be forthwith matured. The commander can then determine—

Whether he should avoid a general action;

Whether he should withdraw his troops from the spot—if so, the means of doing so;

Whether he will accept battle—and if so, in what position.

If he is attacked on the march, it will be better for him to issue his orders from his advanced guard, as he then has the testimony of his own eyes, and can give his orders to the troops at an earlier moment.

While his staff are bringing up his forces, he should remain with the advanced guard, in case matters take a different turn.

Commencement of the Engagement.

The following rules are of value in beginning an engagement.

A. In extending the troops and in connecting them with each other, the regulation order of battle must be established as a starting point. When there happens to be a departure therefrom, as applied to detachments, small parties, wider extensions, &c., the object of these deviations must be carefully explained. They are to be considered as an unavoidable evil, and are never to be resorted to without good reason.

As soon as the special inducement ceases to exist, the troops must resume their proper places.

B. *On Defence.*

1. Defensive positions must, when possible, be so chosen—

(*a*). That the troops for the defence can be formed up so as to be completely concealed until the moment they are wanted.

(*b*). That an unobstructed view may be had from the front.

(*c*). That the front of the position should be as nearly as possible perpendicular to the line of retreat.

(*d*). That when the country admits of it, the front and flanks may be strengthened by obstacles. If no support can be found on which to rest the flanks, they may be made more secure by drawing up reserves in rear. This is preferable to extending them too far.

2. In drawing up troops behind a defile, the course of the fight must be so managed by the defenders that the latter may reap the full benefit of the obstacle.

This may be brought about by the following means:—

(*a*). By the direct defence of the pass.

(*b*). By the enemy's attack being divided into several columns, when an overwhelming force may be brought to bear against one of them.

(*c*). By attacking the enemy approaching before he has had time to deploy.

(*d*). By engaging the assailants so near the defile, that they have only one line of retreat which lies close to their rear. This will oblige them to adopt a deep formation, when the defenders can generally overpower them if they advance to the attack, inasmuch as they have not the disadvantage of a defile in their rear. The

defenders must seek to profit by any of these advantages, and the result will be judged chiefly from the extent in which they have done so.

On Attack.

1. An attempt to turn both flanks of the enemy is only feasible with a great superiority of force, and even then it is seldom desirable.

2. Detaching a force to turn a flank, presupposes a decided numerical superiority.

3. On the other hand it is practicable to fall with a united force upon one wing of an enemy that is even numerically superior, and this is always more effective than a direct attack in front. It must, however, be assumed that the assailant—

(*a*) Has nothing to cover in his rear;

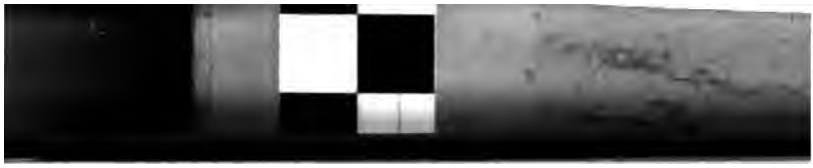
(*b*) That he can open out a fresh line of operations and retreat;

(*c*) That the nature of the ground admits of one or more points in front of the enemy being held by a small number of troops, so as to ensure a safe retreat; or,

(*d*) That the enemy's formation specially favours an attack in which the shortest lines of communication remain with the assailants.

4. It is possible to break through the enemy's centre when a certainty exists of being able to bring more troops against a particular point than the enemy himself possesses there, provided that the local features of this point are of such a nature as to secure an ascendancy (all things considered) to the assailant during the period necessary to accomplish his object.

5. With cavalry and horse artillery combined, turning



positions and all kinds of detached duties may be undertaken, when the ground permits, regard being had to the following fundamental conditions:—

(*a*) That the cavalry which is detached must not be necessary for the protection of the assailant himself;

(*b*) That the country admits of the detached cavalry being liable, under all circumstances, to rejoin the main body in safety by cross roads;

(*c*) That the point which the detached cavalry is destined to attack is so situated that an effect can reasonably be expected to be produced either by the fire of the artillery or the sabres of the cavalry.

6. Flank marches, undertaken with a view to force the enemy to retreat without giving battle, can only be successful when the enemy finds it contrary to his interests to undertake a general engagement; but if he is able and willing to fight, he will take advantage of every opportunity to attack his adversary when his force is divided—a very common occurrence in a flank movement. Such tactics can only be expedient when the enemy's retreat is known to be inevitable, and it is desired to hurry and embarrass it. Since both assailant and defender start from a given base and are bound to protect their rear, they must specify in their dispositions the point upon which a contingent retreat is to be directed, and in the combined movements of an attack the practicability of a retreat must not be lost sight of.

Leading considerations in War.

(a.) *Economy of strength.*

In modern warfare as large a force as possible is displayed on the field of battle, though every effort is

made to engage the enemy with a minimum of troops. In a protracted campaign the object is to exhaust the adversary's forces and reserves, and to keep the army opposed to him intact. If this is successful, he must then be struck in the most vulnerable part and overthrown; the beaten fragments of his army should be pursued to the utmost. Results have thus been achieved by striking one blow, which former wars could not boast of, even after tedious duration. The leading principle in this style of fighting consists in a wise economy of strength, whilst attributing to the opponent a contrary characteristic.

2. All will pay the penalty of neglecting to economise their strength who do not concentrate their forces with that object, who allow of too many detachments and who commit themselves by being precipitate; likewise, those who throw out skirmishers to an immoderate extent, contest every foot of ground, and thus squander their resources; in short, those who, without any definite idea—unhappily a common occurrence in manœuvres—exhaust themselves prematurely, and at the crisis of the battle have scarcely anything at their disposal but unmanageable swarms of skirmishers.

On Cavalry.

The peculiar qualifications of a good cavalry force are a well-established discipline, a facility in moving readily when required, strength to strike and quickness in everything. The officer commanding must form a prompt conception of the scene of action, make up his mind without hesitation, and act with a rapidity almost amounting to audacity. He should be animated with the spirit of the undertaking, and burn to perform his share in it. A freedom of action must be allowed him, of which he must not fail to avail himself. If he first sends in a report, referring the question, and awaits instructions from another

concerning a matter about which he must see to himself and determine upon, he will invariably miss the favourable moment of action.

Some of the objects against which cavalry may direct their attack are infantry in line or in column that have been shaken, artillery, whether limbered up or not, and cavalry when deploying or when they expose a flank, and these may be regarded as certain prizes when taken unawares; but all this must be done at the opportune moment.

The better to observe these opportunities, he should not keep too close to his force, or ride about too much. He should take up a certain position and there remain still, as by continually riding about, he would be less acquainted with what is going on.

The officer commanding should remain stationary, and make his preparations for attack through his staff, as, if his back is turned, the favourable opportunity for action may be missed. He must keep a perpetual watch on the movements of the enemy's cavalry, and on the general course of the whole manœuvre, so as to observe the weak points, the unprotected parts, and the dilemmas of his opponent, and as soon as they present themselves, to take advantage of them.

He will then have leisure to surprise the enemy, by making an attack at the right moment, in suitable strength and front, and with the ground in his favour. He will have to use his discretion in discriminating what objects are most worthy of his attack, and not engage in every small enterprise at the expense of those that are great, or waste time in routing troops or companies when he might meanwhile decide the battle. He should appoint certain officers to examine the ground and report to him upon its practicability, and who will also keep him

"au fait" as to the strength and whereabouts of the enemy's troops.

It is the special duty of the officer commanding the cavalry to watch and discover all that takes place on the field of battle, to effect which, he must sometimes employ force.

No flank movement that the enemy undertakes should escape his notice for an instant, for the force he commands is the most available to check and neutralize the threatened danger, and as such he must use it upon his own responsibility as circumstances demand.

A cavalry force should not be broken up into small bodies, as by so doing, the achievement of great results is prevented.

If he has a superiority of numbers on his side, and the enemy, notwithstanding, ventures into the open plain, he ought without fail to drive the cavalry off the field, and then assisted by his horse artillery, he should fall upon the flank and rear of the infantry.

Cavalry should always attack in line, but manœuvre in column. It is faulty to deploy too soon, as long lines cannot be kept under cover, and are inconsistent with making surprises, besides affording a mark for the enemy's artillery.

Being awkward to move, they cause time to be lost, and by pressing in first to one side and then to the other in their endeavours to preserve the direction, which they fail to accomplish, ultimately fall into disorder.

Column is the only formation in which to reach quickly and with precision the spot from which an attack is to be made; in that formation advantage can be taken of the undulations of the ground to keep out of the sight and fire of the enemy; obstacles can be more easily passed and the goal finally reached at a time and place of which

the enemy has no idea. Once there, a quick deployment must be made, with a clear space in front of 800 or 1,000 paces, the second line in column in support of a flank, so that if the front line is beaten, it can fall obliquely upon the flank of the pursuing enemy.

Should time permit, the horse artillery may prepare the way for the charge, but the favourable moment must never be lost for the sake of having a cannonade.

It is an old glorious tradition of arms, which it behoves every one to maintain, that cavalry must never await an attack where they stand, but always go to meet it, even if less numerous than the enemy.

W. Mitchell & Co., Printers, 39, Charing Cross.

A

Military Memorial,

BY

PRINCE FREDERICK CHARLES

OF PRUSSIA.

EDITED FROM THE GERMAN,

WITH AN INTRODUCTION.

LONDON:
WILLIAM RIDGWAY, 169, PICCADILLY, W.
1866.

INTRODUCTION.

THE Pamphlet which follows in an English dress, caused a deep sensation in Germany at the time of its appearance in the year 1860, and passed through several editions. It very soon appeared in France with a new title (L'art de combattre l'armée Francaise), and was there regarded in the light of a Prussian manifesto. It attained a very large sale, and gave rise to another brochure answering it (Le cri de guerre des Prussiens, pourquoi l'art de combattre l'armée Francaise n'est par celui de la battre). The editor's notice was drawn to it at the time, and he was anxious that it thould be known in England as evidence of what was really passing in the German mind, and because some of the maxims it contained, especially as to the influence of moral force in armies, were likely to be very useful to our volunteer force, which was at that time being raised. There was reason, however, for believing that our relations with France were then so critical, that discussions of the kind were better avoided, and the idea was dropped.

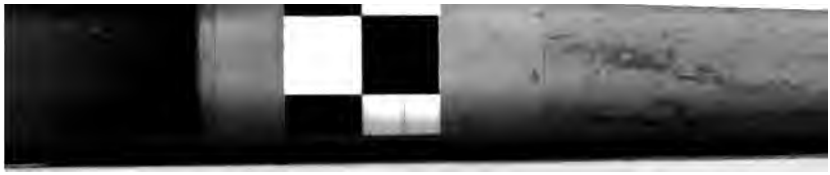
Now, however, that the author has signalized his progress into Southern Germany by very remarkable successes, possibly arising from the practical application of some of these rules, it will probably be read by many with considerable interest;

and should, which may Providence avert, the circle of warlike conflagration widen, we may have the painful interest of observing how far the rules are really applicable to the armies of France.

The opinion of the work and its author expressed by the French editor is as follows, "The observations which this work contains have not only the merit in themselves of penetration and frankness, but they have emanated from the pen of an august person, namely, a Prince of the royal family of Prussia, who is justly considered one of the best informed and most competent officers in the army. Prince Frederick Charles Nicholas, eldest son of the second brother of the King, was born in 1828, and fills one of the highest positions in the Prussian army. Last autumn it occurred to him to set forth, before a meeting of officers at Stettin, the ideas which he had collected upon the manner of meeting the tactics of the French, and it is from notes taken from his dictation, that an anonymous person has had printed at Frankfort the military memorandum, a translation of which we give."

There appears to be no doubt that this is the true state of the case as regards the work itself; the German editor, however, thought proper to draw conclusions of his own in his preface, which gave a higher colour to the work.

I have given the preface to the German edition in extenso. The views contained in it led, as the French editor says, at first to a mystification, as it was clear that the Prince would not have authorized the reference to the democratic principle as *the* energy of the French army, and a prosecution



was set on foot, which however fell to the ground upon the plea that the lecture was public property, and that it was fair to draw any conclusions from it that might occur to the mind.

The military principles which it contains are far from new, indeed some of them are of Greek and Carthaginian extraction, and several have been strongly emphasized by the Great Prussian of the last century, whose movements this present war, even to its names of places, brings so strongly to our recollection. What is principally note-worthy is, that no stress is laid upon tactics at all, which may be infinitely varied according to the genius of the generals employed, but upon moral supremacy, arising out of a sense of power in the individual, and a confidence in that sense of intelligent power on the part of the leaders.

The 1st, 2nd, and 4th principles enunciated, arise directly out of this individual power. The 6th concerns a perhaps partly physical quality of the French troops, as it is of all Celtic nations, but still concerns the individual. The 3rd and 5th rules, though referring to tactics more directly, still have respect to maintaining moral superiority, and their success would in a great measure depend upon the common soldiers understanding thoroughly what they are about, and the objects of the manœuvres in which they are engaged.

The moral for us to draw from this is one which, though still behind hand, we need not altogether contemplate with sensations of guilt or shame. It is that we must improve by education and other means the individual soldier in the ranks of our army, and not suppose that the term " think-

ing bayonets" is universally looked upon as a reproach. We have, besides, in our Volunteer force, a real moral and educational superiority, very different from the comparative moral supremacy of will and energy over simple physical endurance which is spoken of here.

The conclusions drawn from the Prince's lecture by the German editor, throw some light upon the influences which have been working in the German mind for the last 18 years, for we must look to 1848 for the causes of the war for Schleswig and Holstein and that now raging. No one who has not often discussed politics with Germans of different nations can have any conception of the yearning for a united nationality which has been gnawing at the national heart, among all classes and grades. This took the turn of holding out a hand to the Holsteiners as brother Germans, and a knowledge of its existence has no doubt emboldened Count Bismark and the King in their late onslaught on their neighbours. With this, in order to get a clue to late events, we must combine the feeling which exists in Prussia towards the present King, one which a Prussian, once in conversation with the editor, compared to that of the English towards the obstructive tendencies of George III., a certain tenderness, and desire to wait till he has passed off the stage, arising out of a belief that after he is gone they will have the constitutional changes which they desire; "Let us have a strong, united, great power," say the German liberals, "and the rest will follow in time."

The advent of the Crown Prince is looked to as

that of the true *Re galantuomo*, the constitutional King, the King who keeps his word.*

On these revolutions we need not look askance, they are one and all violent attempts (and from them we need not exclude the most violent, that of France) to reach that balanced condition to which we attained long since. Happiest are those countries in which, as in Italy, all classes have been embraced in the change. The first Napoleon, after he had in some degree settled France, felt sorely the gap left by the axe and the emigration, as was evidenced by the bidding which he made for the return of the noblesse. The kind of aristocracy which led to evil in France and Germany is one which in England has not had any strong existence, and has ever been somewhat of an exotic. The influence of family and long established position will ever remain, even though the utmost freedom is given to merit. But this age is giving the death-blow to the remains of what, in fact, was serfdom. A few privileged men, and all the rest to be treated as slaves, which had its culmination in France in the years preceding 1792, but which has lingered in some degree in Austria and the minor German states, up to the present time; and which perhaps is the true secret of what appears, to some minds, the insane desire to tear Austria to pieces.

The principles which are capable of being deduced from the critique of the Prince show the existence in Prussia of the very opposite tendencies

* That kind of faith to oath and troth which amid some failings has been the noted glory and saving grace of our own Guelphic line of sovereigns.

and that in members of the Royal Family--and this fact, in spite of the violence of Count Bismark and the retrogradism of the King, will in the eyes of the German nation as a body cover a multitude of sins.

Austria is, in the minds of many persons, the representative of the age of family compacts, and the treatment of nations as appanages for younger sons. The revulsion from this state of things naturally takes the form of nationality. In this species of Revolution there is nothing truly democratic, as we see in Italy the oldest families, and one of the oldest and noblest of the Royal houses of Europe, that of Savoy, at its head. And however much we may pity those who, like the Royal family of Austria, have had their day of grace and refused to see it,—for had the Emperor of Austria been genuinely determined to become a constitutional sovereign, he might have had all his extra German people, the Italians excepted, as his firmest allies—we must, as Englishmen, feel that we have given the impulse first by example and then by our moral suppport.

Perhaps one of the most remarkable phases of what has been passing of late in Europe, has been the reproduction of themselves by nations, as well as families. We have seen the House of Savoy repeating at intervals of a few hundred years their early history; moving on from Maurienne to Savoy, from Savoy to Sardinia, from Sardinia to Italy; so that in the history of Victor Emmanuel we are strongly reminded of Victor Amédée II.

and Amé VIII.: we see the French interfering in Germany and Italy, in a way which carries us to the times of Pepin, Charles Martel, Charlemagne, and Pope Stephen: the Austrians boast, stand still, and are beaten: the Prussians rob successfully like their ancestors, and the House of Hohenzollern maintains its old renown. To us is given the somewhat selfish blessing in which our age, in its idiosyncracy, sees the highest good; but which, as expressed very clearly by the Latin poet, we were taught in our youth was a horribly wicked sentiment, akin to La Rochefoucauld's maxim as to the misfortunes of our friends, and the "Am I my brother's keeper" of the first murderer.

> "Suave, mari magno turbantibus æquora ventis,
> E terrâ magnum alterius spectare laborem;
> * * * * *
> Per campos instructa, tuâ sine parte pericli
> Suave etiam, belli certamina magna tueri."

Shall we lay the salve to our consciences that we have not, like wreckers, ever held out false lights to our brethren in the horrors of the great deep?

C.

PREFACE TO THE GERMAN EDITION.

The following reflections were naturally written before the conference of Princes at Baden, since which no one for an instant thinks of the possibility of a European War. But taking it for granted that the "Military Memorial" has only a theoretic interest, there is no province in which theory and practice are more intimately bound together than this. The consciousness of complete power of self-defence, that one fears no neighbour and is a match for any enemy, is among the highest blessings of a nation, and is incidentally also, by its immediate influence upon the position of states in the world, the spring of many near-lying practical results and material advantages.

The little paper which we are giving to the world is so written and *so revised*, as not to betray to the outer world any military state secrets, if any still remain! An officer of high rank, who is still young, it follows of course that such an one in Germany is of distinguished birth, has written it. In a country in which the tenors and lovers' parts are engaged for a life time, where the statesmen and generals are only ripe for action when they have arrived at the extremest decrepitude of old age, it is unquestionably of moment to examine the views of a man, who finds himself in the exceptionally happy position of being able with the strength of youth to modify the fate of his fatherland—in case, that is, the olive leaves of Elihu Burritt and the

Baden Conference should by chance turn out inefficacious. To him it honestly results from that, that his first attempts should be submitted to competent critics. We are not committed to this view but to another, namely, that he has touched the true soldierly side of the question, which in the public mind is striking with ever more violent waves against the dams of ancient prejudices. We have here, namely, a real soldier speaking, who is earnest with his profession, and by a short logical process, as well as by the way of an undeniable historical experience, reaches the result, that *moral strength and a united spirit* are the first conditions of the safety of States.

That this conviction finds place in high, even in the highest circles, ere it is *too late*, is in itself a singular occurrence. It was not, naturally, the province of the author to draw from his work the last conclusions, the road from the simplest premises to the most undoubted conclusions is often one of diabolical length. It is all the same, the road must be passed over, every sincere patriot must at length see that the heartiness and *élan* (schwanghaftigkeit) of the French army rests upon the democratic principle of equality, which has guided its organisation, and has been the first thing after the defeats of the 18th century to bring them again to great wars. This powerful organisation has, it must be confessed, outlasted the freedom of the French, but the force of momentum still remains, suppressed in the people's life, and no one tries, no one dares, to degrade them to mechanical drill and systems. Patriotism can never be taught by drill. What must be owed to freedom can never more be accom-

plished by bureaucratic succedanea. The education of the soldier must be an integral part of the great, whole people's education, which rests upon free institutions and powerful political developments. What use is it to our soldiers to read, or to be able to sing a national hymn, when thinking is forbidden to them, or brings them into trouble? As long as there is an impassable gulf between our noble officers of the guard and the common soldiers, none of the former will exercise a wholesome influence, pipe-clay (kamaschendienst, gaiter-service) and routine will paralyse all wholesome strength; we must lead free men to victory, or—we shall not gain any victories at all.

ON THE MANNER OF FIGHTING

OF

THE FRENCH.

A PERSON who supposes that the French fight in an irregular and disorderly way, like the hordes of Attila, is as much mistaken as one who expects to find in them an adversary subjected to the strict rules of military art. We must look for the truth between these two extremes. While the French army, preserves, in time of war, that absence of formality which characterizes it in time of peace, it substitutes for what it wants in that direction, the practice of certain very simple principles, and certain tactical truths, which reproduce themselves oftener than one would suppose. For instance, in the last war in Italy, certain effective movements (kunstgriffe) were introduced, as quite new, which were not so at all, for they had already been put in practice by General Moreau, in the campaigns on the banks of the Rhine.

Before the embarcation of the French army for the Crimea, at Varna, Marshal St. Arnaud, had recalled to life some of these principles of tactics. The orders which he issued, were moreover, simply an important and almost textual résumé of certain little writings of Marshal Bugeaud, who was with justice considered in the French army the most skilful and experienced instructor in contempo-

rary military art, and who knew the French soldier better than any one.

For a long time past I have given my attention to an inquiry into the principles by which the French are influenced when they make war, and believing that I have arrived, after consulting the most varied sources of information, at a discovery of the most essential, I shall try to disclose them as briefly as possible.

1. The first of these principles is, and one publicly avowed, to set absolutely aside, as soon as the army is in the field, the regulations of the barracks, and the very recollection of the parade ground.

The saying of Napoleon I. is still fresh in our recollection, "That we must change our tactics every ten years, if we would preserve our superiority upon the field of battle." That great captain himself changed his tactics very much oftener. He put in practice all the rules of manœuvre and even all the exceptions, so that, in my opinion, there can be no question of "Napoleonic tactics" properly so called. Noteworthy also is that reproach which Marmont in his Memoirs brings against the Emperor, of having neglected, owing to his sudden rise from the rank of Lieutenant of artillery to the dignity of General-in-chief, to fathom the whole subject of military tactics, and of having, consequently, disdained to make use of the resources which it could offer.

There does not exist among the French any

order of battle, any form which prevails on every occasion. The manner of conducting the troops to battle is left to the initiative, and the talent of the Generals, who for their part rely upon the knowledge of their profession possessed by their subaltern officers, and upon the intelligence of the soldier. "The French soldier always marches forward, forward." ("Le soldat français marche toujours en avant, en avant.") Such is the French method in all its simplicity; little imports the form, that differs with the end in view, the ground, the manœuvres and above all the errors of the enemy.

The very natural consequence of this way of acting is, that the French will not fight on the battle fields of the north of Europe in the same way as in Italy; and I think that we shall be very much mistaken if we suppose that they will employ the same means against us as against the Austrians. For this single reason, it seems to me useless to criticize deeply their tactics in the war of Italy.*

2. A second principle, which soon becomes as familiar to the soldier as to the general, rests in the axiom that "moral force is superior to physical force."

Napoleon struck out this idea when he said

* We shall do well to consult, for everything which relates to the war in Italy, an excellent work, entitled "Relation militaire de la guerre d'Italie, by Ferdinand Lecomte, major fédéral."—Paris, chez Tanera.

"that moral force contributed three-fourth parts to success, while physical force only contributed one-fourth." The whole education and forming (ausbildung) of the French soldier rests upon this principle. This is why, with him, the individual feeling (sentiment individuel) is of such high importance. For example, the French disdain to practise, by manœuvring one division against another, because the moral element has no part in it, and the body weakest in numbers gives way. According to our notions the manœuvres to which they confine themselves appear defective; but should we discover grave errors, we may be sure that they will have provoked among the French neither blame nor criticism. The Chief who has ordered the movements, even the stupidest, retires with the most complete and the most undisturbed sense of his own infallibility and success. The French officer has no knowledge of that uncomfortable sense (angst) of his superiors, that uneasiness (unbehaglichkeit) in the presence of a superior officer found so often among us; and every general, every officer, marches to battle without after-thought, sure of himself, full of confidence in his lights, and in his courage, on however poor a foundation his pretensions may be resting. We may understand the superior weight which such officers must have compared with those who fear criticism more than the enemy, and to whom custom has given too limited a responsibility.

The French soldier says, "We have no tacti-

cians," but, in his mouth, this is not a reproach, as we may well believe. For he judges his generals much less by their talents in the art of commanding manœuvres (the results alone decide for them the correctness of the manœuvre), than by the gift which they possess, of impressing upon the whole body the "élan" or impulse of which they stand in need. And the French soldier is right; for to communicate to others a force of impulsion (schwungkraft), one must oneself possess a rare energy! That moral chapter of the art of war, which springs from knowledge of the human heart, constitutes the better part of the greatness of a general. It is a gift which nature rarely grants, and which is still less to be acquired, but which the soldier feels and which goes to his heart at once. It was exactly this quality, combined with the care which they had for the well-being of their soldiers, which made MacMahon and Canrobert so great in the French army. The soldiers who served under the latter, tell with feelings of joy and pride, how, when in the Crimea, he had any stroke (auftrag) hard of execution, he first of all asked them, "Do you feel yourselves up to the task?" Never did they answer No, and success so much the more readily attended the attempt of Canrobert, that the end in view being known to all the soldiers, the will of all was engaged in attaining it. A moral lever (hebel) was also obtained by the promise of success which they had given, themselves, to their general.

Besides this, the French do not disdain to use

Machiavelian means, such as surprises,* and unexpected movements, to stun the enemy, and make him lose his head. For example, they often attack, making terrible cries, which still more tend to encourage themselves. The aspect of bronzed Turcos, or the Zouaves with their crabbed countenances, and their madman shouts, would be well calculated to intimidate our young soldiers, if we did not prepare them beforehand for these strange apparitions.

It is for this reason that I hold that we should not neglect to forewarn them of this danger, which once known will startle them less than if it took them quite by surprise.

3. Another principle of the French is to keep in close columns against enemies little exercised in manœuvring, because in general these are more bold and enterprising; while on the contrary when the French have to deal with a body of men of regularity and well drilled, they fight it in irregular form and as skirmishers.

* Frederic the Great, in speaking of surprises, has the following passage: "In the campaign of 1745, if it had been my intention to take Königingratz and Pardubotz, I had only to make two marches through the country of Glatz, on the side of Moravia, as that would certainly have alarmed Prince Charles, and brought him thither to defend the place from which, after leaving Bohemia, he drew all his provisions." And almost immediately after—"If we have no inclination to fight we put a bold face on the business, and give out that we are much stronger than we are. Austria is a famous school for this sort of manœuvre, for with them the art is brought to the greatest perfection."—*Instructions*, p. 54.—Ed.

The Kabyles and all the other enemies of the French in Africa belong to the first of those two classes of troops of which I have spoken. We need not dilate upon the very sensible tactics which the French employ in engaging them.

As to the second class, it is principally the Russians, Austrians, and ourselves the Prussians that we have in view. Marshal Bosquet, with whom I one day had a conversation upon this subject, related to me that in one of the battles around Sebastopol, "Forwards, children of the fire," he had cried in Arabic to the sunburnt children of the desert, the indigenous riflemen called Turcos. Cries of the jackal answered his appeal. Stooping low, to avoid the passage of the balls, they threw themselves in disorder upon the Russian columns with the bayonet. Embarrassed by one another in their serried columns, the Russians were repulsed without the possibility of defending themselves, because they could not stretch their points far enough to reach their enemy.

In describing this attack of the Turcos, Bosquet said to us, "Ils bondissaient comme des panthères dans les buissons." This deed of arms recalls to us that bragging speech of a Frenchman lying wounded with seven bayonet wounds: "No Russian can boast that he has not had enough of it, for it only needs one stroke of a French bayonet to give death."

4. One of the most essential principles of the French, one of those moreover which appear

> to me to have been most often put in execution in the last campaigns, is that of never defending themselves in a passive way, but of constantly acting on the offensive, even in the case where it is only a question of defending themselves.*

We find the most signal instance of it in the action of Montebello. General Forey is surprised by the enemy in his cantonments. Though inferior in numbers, he hurries immediately to the attack, and makes all his battalions march in front, instead of employing them to secure his rear, and prepare for the retreat. The French make fun of the Austrians, who do not know how to make use of their reserve, and only employ them as dummies (nur figuriren liessen); what in fact is the use of a reserve, if it takes no part in the action? Would it not be better to have none?†

Nothing is so contrary to the character of the French, as defending themselves in position standing still.

It is even asserted that in such a position they

* This was one of the precepts of Frederic the Great's Instructions to his army, p. 113, *Foster's Ed.*—"I allow the Prussian troops to take possession of advantageous posts as well as other troops, and to make use of them in favour of any movement, or to take advantage of their artillery; but they must quit this post instantly to march against the enemy, who, instead of being allowed to begin the attack, is attacked himself and sees his projects miscarry—we must rank battles of this kind among the best."—Ed.

† It is a singular thing that the Austrians seem to have failed at Sadowa in making proper use of their reserves.—Ed.

are useless. This is possibly the case, and it is a weakness in them out of which we should make our profit. They despise an enemy who, at least at the last moment, does not march to meet them.

I think that I may attribute the principle of active defence, carried to excess as we see it now among the French, to the initiation of Marshal Bugeaud;* for he writes, "we must try to bring into operation everything which tends to build up the moral force of our soldiers, and to beat down that of our adversaries. In virtue of this principle we should never allow ourselves to be attacked. At the decisive moment we should always take the initiative. In a moral as well as a physical point of view, we must always take it for granted that a true and good defence will always take the form of an attack. Offensive movements against the flanks and rear of the enemy rarely fail in their object, and were they only attempted by a handful of people, they could not but produce an extraordinary moral effect."

These lines not only contain the advice of an offensive defence, but also the way of resisting the attack, not front to front, but as in cavalry tactics, front against flank. The flank is weaker than the front: when it is threatened, the attack is paralysed, and the enemy is obliged to change direction to meet the attack. By this manœuvre, it

* Perhaps revived by him in late times, but it was unquestionably a principle of Frederic the Great, and apparently taken by him from Turenne.—Ed.

runs a great risk of being attacked on two sides at once; we should therefore always cover our flanks, by means of platoons *en échelon*, or companies ready to form either as skirmishers or in column, or in lines of attack. I have already expressed myself upon this head, in the month of August of last year, before the commencement of the manœuvres of detachments; and I recalled in speaking of the attack of the infantry those words of the Great King:* "The officer in command of a squadron of cavalry who allows himself to be attacked by the enemy, and does not attack himself, should be broken *cum infamiâ*; for the Prussian cavalry should always attack first."

This precept, which contains the secret of the spirit of chivalry, must, it is true, undergo some modifications before we apply it to infantry; but it is becoming no less every day more axiomatic. We shall always do well, at the last moment, not to await in position the attack of the enemy, but move to meet him. Of course there are exceptions, and the way of realizing this precept depends upon circumstances. Thus, for instance, a line of fire well covered will not abandon its position to take the offensive, but it will leave to another division the business of directing an attack upon the flank, against the enemy.

With their continual attacks, the French who would fight us on a country much more bare than in Italy, would doubtless suffer greater losses, but

* Frederic the Great.

if we allow them to do it without special resistance, they will end by gaining their object.

The French soldier knows, partly by personal experience, that the danger of being reached by gunshots is only very great at certain mean distances. When once one has got beyond these distances the danger, instead of increasing, diminishes in proportion as you near the enemy, and at last ceases almost entirely.* With the ordinary guns this experience is infallible, and it seems to be confirmed even with rifled pieces.

The fact is easily explained. The more near the enemy approach, the more haste is used in loading and firing, and the worse aim is taken. The gun is scarcely at the shoulder before the shot is fired, nearly always too high.

So then this last circumstance forces us to have recourse to the bayonet, when the enemy is a hundred or a hundred and fifty paces off, and where the value of the position, or the configuration of the country does not absolutely interdict it.

If it happens that the French are attacked by a close column, this is how they proceed, and this means of procedure is particularly to be recommended when the attack is isolated, and does not rest upon a corps of reserve. The French skirmishers give up the ground at the point of attack; their line doubles round. The attacking column which thinks that it sees the beginning of an

* According to Frederic the Great, men at 150 yards always cease firing and take to the "white arm." This rule would probably be much modified by the use of breech-loaders.—Ed.

effect produced carry on, but soon the skirmishers present a front again, one or two columns press on, the attack slackens, it loses time, it is surrounded, it cannot retreat, and now it must engage, and surrender itself to its unhappy fate! The French are at this point advised not to kill, but to make prisoners, because in the time which it takes to kill one man, five or six may be captured.*

5. The idea which predominates in the regulation of skirmishers in France, appears to me particularly important, it is nearly this:—"Skirmishing is only a make shift." (noth behelf.)

This way of fighting having the drawback of loss of time, and of never being decisive, we must not skirmish except when we can do it with perfect freedom; but we must never be forced to it by the enemy, because it is of the utmost importance never to do what he wishes, never to calculate our measures and movements upon his, but to impose our own upon him; by this means we not only paralyse him, but we obtain over him a real moral supremacy. This is the reason why, when skirmishing does not suit us, we should never oppose a line of skirmishers parallel to those of the enemy. It would be a useless expense of men, ammunition, and of time. If we oppose to the enemies' skir-

* The use of this rule perhaps accounts for the number of prisoners taken in the late battles.—Ed.

mishers a new line of skirmishers, it should always be on an oblique front, or on the flanks.

But what is of more use still, when it is a question of an energetic attack with a small force, is to send some platoons or companies in double quick time, and without firing, to break the enemy's line.

In the majority of cases it will be enough to menace the flanks of the line of skirmishers by an attack in force (schwarm-angriff) to make them yield, and to give up this way of fighting.

6. We should give very particular attention to the manner which the French have of attacking with that ardour which is peculiar to them (die angriffe der Franzosen), and with which Cæsar was surprised. Even in his time he considered their first attack as the most dangerous, and those which followed as less powerful.

However that may be, the vehemence of attack, the "furia francesa" of the wars of the Revolution, is still at the present day the national characteristic. The French are accustomed at the beginning of the action to sound the enemy's lines, in order to come to a conclusion as to its forces and its arrangement. This they do by partial attacks, which, as far as possible, attempt to reach the point that appears to them to be an object to be gained. If they meet a serious resistance they abandon their attempts, until they can renew them in sufficient force. Sometimes, however, these actions of the

advanced guard do not take place. So, in the last war in Italy, doubtless with the idea of being able to surprise the enemy, owing to the covered character of the country, they appear to have generally begun by serious attacks. They, with this view, deployed, at about a thousand paces from the enemy, skirmishers, followed immediately by columns which accompanied them in double quick time, and threw themselves with them upon the enemy's lines. It is known that at Solferino they surprised the Austrians at the moment when at the end of a meal they were forming for the march. They began by falling upon the videttes, who had only time to discharge their pieces and take to flight. The advanced guard made no better resistance, and fell back (eilten zu den Replis). It was at this point that the action began. The French had in their favour the ground they had taken up, and the moral effect of the surprise and the attack. Need we more than this example to shew us that they do not keep to the principle of sounding the enemy's arrangements, but that with them every thing depends upon circumstances.

Upon principle the French make use, quite at first, and before all the rest, of their choicest troops. A third of every battalion is formed of chosen soldiers (élite), Chasseurs and Zouaves. These picked bodies of men are better than the rest throughout, and in time of peace enjoy a certain distinction. They are consequently composed of men whose ambition is excited to the highest pitch, and their losses are soon repaired,

because the honour of being admitted into their ranks is generally coveted. So, too, they are made to march first, so as to gain the earliest advantages, to win moral supremacy to the side of the French, and in this way to smooth the way into action of the other troops. When it is in prospect to attempt some bold stroke, recourse is often had to volunteers taken from these *corps d'élite.* Nevertheless in the Crimea they avoided taking them man by man from the foreign legion, which might be considered as forming part of the *élite*, because every man would have come forward, so they were obliged to call them forward by companies.

It is a principle of the French army, that the attack, when once determined on, cannot be carried into execution too rapidly. This is the reason why they prolong the fire as little as possible. In Italy, the fire scarcely lasted a quarter of an hour before they came to the charge with the white arm; often there was no powder burnt in the action. It is, besides, a principle adopted in the French army, not to stop to fire in the beginning of the action, because so the attack loses its heat and freshness, and the losses are more important.

It appears that the French now always attack in double quick time, in which they exercise themselves in time of peace, so that they are not out of breath when they reach the enemy. They are thus in accord with the distinguished man who said, "There is in the blood of man a heat which is developed by motion; he who does not under-

stand this law of nature, is only a beginner in military science." The following passage in a letter of Marshal Saint-Arnaud, addressed to his wife, on the battle field of the Alma, and under the fresh sense of the victory, is not less remarkable. "The English," says he, "came upon strong redoubts, and have lost more than I have; besides, my brave soldiers ran, while the English are content to walk."*

The first attack thus usually takes place at a run; the skirmishers advance in this way to about a hundred and fifty paces from the enemy without firing. They only begin to give their fire when the columns which follow them are under weigh; this is evident, as the skirmishers at that distance, if unsupported, by being left isolated, would be repulsed in confusion. Thus, then, the attack of lines and close columns begins together. This impetuous way of beginning the battle surprises and terrifies the enemy. This is the advantage which it gives. If it is crowned with success, the agglomeration of different bodies (to which we must add the reserve which usually follows immediately after the columns), is without inconveni-

* An English officer, whose father was a General in Napoleon's army, informed the editor that at a review in the Champ de Mars of several thousand men, they charged in double quick time and in line for 500 yards. The line was well kept, and no men dropped behind, and on coming in they appeared not to have suffered. Is any English regiment ever expected to do this, and could they venture to do it? Would it not be well for our soldiers to lay this to heart?

ence, but if it is repulsed, disorder and an inevitable pell-mell is the consequence.

The French have no idea of a well ordered retreat; they try to outstrip one another, and their flight becomes a general *sauve qui peut.* This is one of their greatest weaknesses, of which we should know how to profit, by sending at their heels a body of infantry and cavalry. Here it is of importance not to lose a second, as the disorder is soon repaired.* If the French have succeeded in their attack, they follow with their skirmishers the enemy's columns which give way. If these are isolated, the skirmishers, who get on much quicker than they do, attempt to outstrip them and hem them in, so as to cut off their retreat; the French masses then press on, so as to complete the defeat of the enemy.

The French are much more methodical than the German troops, in the assault or defence of a place: they employ the fewest possible number of men for the immediate defence; but to compensate, they keep on foot strong reserves, whose duty it will be to attack the enemy on the flanks outside the fortifications, and beat them off if possible. It is exactly this precaution which the Germans nearly always neglect, while they are in the habit of employing a very large number of soldiers in the occupation of the place. The

* This was shown very remarkably at Marengo, where at one time a panic seized the French army; they were, however, rallied by General Desaix, who was shortly afterwards killed. —Ed.

method of the French, too, in seizing on a place, is different from ours. Often, instead of contenting ourselves with the possession of a fortified outwork, we are carried on, in the heat and disorder of the action, to follow the enemy beyond our object. The consequence of this attraction is, that meeting fresh troops we are easily beaten by them, and we lose the power of holding the works we have taken. The enemy retake them, the action begins again; that is all we get for our trouble and our losses. The French, on the contrary, never follow the enemy beyond a place with the same troops that have taken it. These are established there, and prepare for its defence by barricading the approaches, and leave to other troops the charge of following the enemy. They know that they cannot attain every thing with one breath and the same effort, and they content themselves with a moderate success, at the same time taking measures for making good their acquisition, however small it may be, free to begin a new attempt afterwards.

I have now arrived at the end which I proposed to myself. It remains to say, in passing, that night attacks are not favoured by the French.* They appear to fear them, doubtless because at

* Here again we may quote Frederic the Great: "For my own part I am determined never to attack by night, on account of the confusion which darkness necessarily occasions, and because the major part of the soldiery require the eye of their officers and the fear of punishment to induce them to do their duty." To this we might add, what was always a bugbear to the kidnapping old monarch, "danger of desertion."—*Instructions to the Army, p.* 100.—Ed.

night their habitual tendency to disorder degenerates easily into complete dissolution. We know from histories of old the panics which have sometimes seized them at night, and even by day; for instance, that which took possession of them in the afternoon of the second day of their victory near Wagram.

One word in conclusion, about the forms they employ. I shall recall to you that the French use in attacking, columns of the most varied nature, but that they échelon them in every sort of way. In this manner they protect their flanks for attack as well as defence, gradually bring their forces into action, and keep back a great part of their men, but always in an offensive attitude. This way of proceeding reminds one much of the oblique order of battle of Frederic the Great, and I can besides assure you positively that in this they have only imitated him. It is the same with the majority of the principles of which I have spoken; they are more or less in conformity with true tactics; but in place of being of French origin they have been formerly employed by our Generals with greater or less success. It rests then with each of us to put them in practice in future, which will be the easier for us the more we are convinced of their importance. History is there to prove to us that these principles are not the exclusive privilege of the French, nor the immediate result of their national character.

May we only ponder this while there is still time! The facts which have taken place in the

last wars, speak more powerfully than anything I can add. All the world has been able to satisfy itself of this truth, by the pen of steel upon the annals of history, that is, that the Austrians and Russians have been everywhere and always beaten by the French. The English, kept up by the skilful tactics of the intrepid Wellington, have been morally outstripped by them.

Now, if Prussia puts to herself this haughty question: what will be our fate in a war with France? We can conquer her, I shall answer; and we shall conquer her with a certain blow, if we know how to detach ourselves, in time of war, from the routine of the drill ground, the demands of regulations, and from our system of skirmishers. Here is the difficulty, this is my only anxiety. The motive power which these forms give, is insufficient to maintain discipline, to bring the soldiers up to the enemy, and to make them sustain their fire. Thank God, we have others, and we shall know how to bring them to our aid.

Already several times we have succeeded in overturning the legions of the Emperor of the Gauls, and what we have done, with the help of God, we can do again!

An addition appeared to the body of the critique which we have given in full above, in which the Prince answers certain criticisms and observations made by friends and comrades upon the proposi-

tions contained in it, and enters at some length into questions of tactics; defending himself against the upholders of the ancient systems, and showing that what he said is in fact not inconsistent with tactical power. To reproduce these arguments at length would be tedious, and quite beside the aspects of the questions which are interesting to readers in this country. The work itself shows the judgment passed by an officer of high rank in the Prussian army upon that of the French, the frankness with which he holds up to admiration certain points in their tactics, and the high opinion which he has of their intelligence and moral qualities.

He protests, however, against the supposition that his object is to impose the military principles of the French upon the Prussian army.

There are, however, in his opinion, three conditions to be observed at once, in order to render the Prussian army capable of conquering that of France.

1. To develope the military qualities of each individual soldier earnestly in time of peace.
2. To give the army leaders who have a thorough acquaintance with the three principal arms.
3. To oppose to the French a more varied and elastic form of tactics.

In Germany he considers that the true warlike power of the individual has been lost under the weight of severe discipline and authority. Man